SECURITIES & EXCHANGE COMMISSION EDGAR FILING

MEDICINES CO /DE

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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: March 31, 2018
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (No Fee Required)**
For the transition period from to

Commission file number 000-31191

THE MEDICINES COMPANY

(Exact name of registrant as specified in its charter)

Delaware	**04-3324394**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
8 Sylvan Way	
Parsippany, New Jersey	**07054**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(973) 290-6000**

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth 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 ☐

Emerging growth company ☐

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes o No ☑

As of May 4, 2018, there were 73,611,023 shares of Common Stock, $0.001 par value per share, outstanding (excluding 3,013,143 shares held in treasury).

THE MEDICINES COMPANY
QUARTERLY REPORT ON FORM 10-Q
For the Quarterly Period Ended March 31, 2018
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Part I. Financial Information

Item 1. Condensed Financial Statements

THE MEDICINES COMPANY
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited, in thousands, except share and per share amounts)

	March 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 215,962	$ 151,359
Short-term investment	24,521	—
Accounts receivable, net of allowances of approximately $5.2 million and $7.1 million at March 31, 2018 and December 31, 2017, respectively	7,740	3,496
Inventory, net	4,757	5,559
Prepaid expenses and other current assets	30,091	11,688
Current assets held for sale	—	391,202
Total current assets	283,071	563,304
Fixed assets, net	16,533	17,254
Goodwill	200,571	200,571
Restricted cash	5,543	5,541
Contingent purchase price from sale of businesses	326,536	80,700
Other assets	28,920	5,613
Total assets	$ 861,174	$ 872,983
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 5,907	$ 10,244
Accrued expenses	99,295	95,197
Current portion of contingent purchase price	4,854	4,995
Other current liabilities	397	4,476
Current liabilities held for sale	—	60,580
Total current liabilities	110,453	175,492
Contingent purchase price	14,344	14,655
Convertible senior notes	655,943	649,198
Other liabilities	12,778	8,724
Total liabilities	793,518	848,069
Stockholders' equity:		
Preferred stock, $1.00 par value per share, 5,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock, $0.001 par value per share, 187,500,000 authorized; 76,561,786 issued and 73,548,643 outstanding at March 31, 2018 and 76,191,958 issued and 73,178,815 outstanding at December 31, 2017	76	76
Additional paid-in capital	1,390,484	1,377,393
Treasury stock, at cost; 3,013,143 and 3,013,143 shares at March 31, 2018 and December 31, 2017, respectively	(90,016)	(90,016)
Accumulated deficit	(1,228,417)	(1,257,356)
Accumulated other comprehensive loss	(4,471)	(5,183)
Total stockholders' equity	67,656	24,914
Total liabilities and stockholders' equity	$ 861,174	$ 872,983

See accompanying notes to condensed consolidated financial statements.

THE MEDICINES COMPANY
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited, in thousands, except per share amounts)

	Three Months Ended March 31,	
	2018	**2017**
Net revenues	$ 7,771	$ 17,465
Operating expenses:		
Cost of revenues	2,737	9,978
Research and development	40,366	26,444
Selling, general and administrative	28,951	40,457
Total operating expenses	72,054	76,879
Loss from operations	(64,283)	(59,414)
Co-promotion and license income	228	757
Loss on short-term investment	(29,989)	—
Interest expense	(12,077)	(12,422)
Other income	2,369	111
Loss from continuing operations before income taxes	(103,752)	(70,968)
Benefit from (provision for) income taxes	18,916	(28)
Loss from continuing operations	(84,836)	(70,996)
Income (loss) from discontinued operations, net of tax	113,985	(31,674)
Net income (loss)	$ 29,149	$ (102,670)
Basic (loss) earnings per common share:		
Loss from continuing operations	$ (1.15)	$ (1.00)
Earnings (loss) from discontinued operations	1.54	(0.44)
Basic earnings (loss) per share	$ 0.39	$ (1.44)
Diluted (loss) earnings per common share:		
Loss from continuing operations	$ (1.15)	$ (1.00)
Earnings (loss) from discontinued operations	1.54	(0.44)
Diluted earnings (loss) per share	$ 0.39	$ (1.44)
Weighted average number of common shares outstanding:		
Basic	73,802	71,073
Diluted	73,802	71,073

See accompanying notes to condensed consolidated financial statements.

THE MEDICINES COMPANY
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited, in thousands)

	Three Months Ended March 31,	
	2018	2017
Net income (loss)	$ 29,149	$ (102,670)
Other comprehensive income (loss):		
Foreign currency translation adjustment	(471)	(328)
Amounts reclassified from accumulated other comprehensive loss	1,183	—
Other comprehensive income (loss)	712	(328)
Comprehensive income (loss)	$ 29,861	$ (102,998)

See accompanying notes to condensed consolidated financial statements.

THE MEDICINES COMPANY
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in thousands)

	Three Months Ended March 31,	
	2018	2017
Cash flows from operating activities:		
Net income (loss)	$ 29,149	$ (102,670)
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Depreciation and amortization	728	8,030
Amortization of debt discount	6,745	6,973
Unrealized foreign currency transaction losses, net	768	352
Stock compensation expense	4,454	6,643
Gain on sale of business	(168,955)	—
Loss on short-term investments	29,989	—
Reserve for excess or obsolete inventory	(410)	—
Changes in contingent purchase price	(262)	8,512
Changes in operating assets and liabilities:		
Accounts receivable	(4,206)	(400)
Inventory, net	1,213	(790)
Prepaid expenses and other assets	5,552	3,907
Accounts payable	(4,351)	(10,972)
Accrued expenses	(9,931)	(21,395)
Other current liabilities	(4,047)	(294)
Payments on contingent purchase price	(19)	(12,343)
Other liabilities	4,262	(5,155)
Net cash used in operating activities	(109,321)	(119,602)
Cash flows from investing activities:		
Purchases of fixed assets	(7)	(1,333)
Proceeds from sale of business	166,383	—
Net cash provided by (used in) investing activities	166,376	(1,333)
Cash flows from financing activities:		
Proceeds from issuances of common stock, net	8,683	24,694
Payments on contingent purchase price	(171)	(8,723)
Purchase of shares of non-controlling interest	—	(167)
Net cash provided by financing activities	8,512	15,804
Effect of exchange rate changes on cash	(962)	16
Increase (decrease) in cash, cash equivalents and restricted cash	64,605	(105,115)
Cash, cash equivalents and restricted cash at beginning of period	156,900	546,867
Cash, cash equivalents and restricted cash at end of period [(a)]	$ 221,505	$ 441,752
Supplemental disclosure of cash flow information:		
Interest paid	$ 10,534	$ 11,611

(a) The following table provides a reconciliation of cash, cash equivalents and restricted cash to amounts reported within the condensed consolidated balance sheet:

Reconciliation of cash, cash equivalents and restricted cash		
Cash and cash equivalents	$ 215,962	436,715
Restricted cash	5,543	5,037
Total cash, cash equivalents and restricted cash	$ 221,505	$ 441,752

See accompanying notes to condensed consolidated financial statements.

THE MEDICINES COMPANY
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

The Medicines Company® name and logo, Angiomax® and Angiox® are registered trademarks or trademark applications of The Medicines Company in the United States and/or other countries. All other trademarks, service marks or other tradenames appearing in this Quarterly Report on Form 10-Q are the property of their respective owners. Except where otherwise indicated, or where the context may otherwise require, references to "Angiomax" in this Quarterly Report on Form 10-Q mean Angiomax and Angiox, collectively. References to "the Company," "we," "us" or "our" mean The Medicines Company, a Delaware corporation, and its subsidiaries.

1. Nature of Business

The Medicines Company (the Company) is a biopharmaceutical company driven by its purpose to solve major medical, societal and economic challenges in healthcare. The Company has a singular and relentless focus on one of the greatest global healthcare challenge and burden - that presented by atherosclerotic cardiovascular disease (ASCVD), which remains the number one cause of death in the United States and worldwide. The Company takes on that challenge by developing inclisiran, the investigational RNA interference therapeutic, that specifically inhibits production of PCSK9, a key protein that controls LDL-cholesterol (LDL-C) levels. The Company believes inclisiran is uniquely suited to make a significant difference reducing risk in ASCVD. The Company has the right to develop, manufacture and commercialize inclisiran under its collaboration agreement with Alnylam Pharmaceuticals, Inc. (Alnylam). In addition, the Company markets Angiomax® (bivalirudin) in the United States primarily through a supply and distribution agreement with Sandoz Inc. (Sandoz), under which the Company granted Sandoz the exclusive right to sell in the United States an authorized generic of Angiomax.

On November 3, 2015, the Company announced that it was in the process of evaluating its operations with a goal of unlocking and maximizing stockholder value. In particular, the Company stated its intention was to explore strategies for optimizing the Company's capital structure and liquidity position and to narrow the Company's operational focus by strategically separating non-core businesses and products in order to generate non-dilutive cash and reduce associated cash burn and capital requirements.

As a result of the Company's decision to narrow its operational focus, the Company executed on several strategic transactions, including the 2016 divestitures of its hemostasis portfolio consisting of PreveLeak, Raplixa and Recothrom (the Hemostat Business) to wholly owned subsidiaries of Mallinckrodt plc (Mallinckrodt) and its non-core cardiovascular assets consisting of Kengreal, Cleviprex and rights to Argatroban for Injection (the Non-Core ACC Products) to Chiesi USA, Inc. and its parent company Chiesi Farmaceutici S.p.A. (Chiesi). In addition, on January 5, 2018, the Company completed the sale of its infectious disease business, consisting of the products Vabomere, Orbactiv and Minocin IV and line extensions thereof, and substantially all of the assets related thereto, other than certain pre-clinical assets, to Melinta Therapeutics, Inc. (Melinta) pursuant to a purchase and sale agreement dated November 28, 2017 between the Company and Melinta. At the completion of the sale, the Company received approximately $166.4 million and 3,313,702 shares of Melinta common stock having a market value, based on Melinta's closing share price on January 5, 2018, of approximately $54.5 million. In addition, the Company is entitled to receive (i) a cash payment payable 12 months following the closing of the transaction equal to $25.0 million; (ii) a cash payment payable 18 months following the closing of the transaction equal to $25.0 million; and (iii) tiered royalty payments of 5% to 25% on worldwide net sales of (a) Vabomere and (b) Orbactiv and Minocin IV, collectively. As a result of the transaction, the Company accounted for the assets and liabilities of the infectious disease business that were sold as held for sale at December 31, 2017. Further, the financial results of the infectious disease business were reclassified to discontinued operations for all periods presented in the accompanying condensed consolidated financial statements. See Note 15 "Discontinued Operations" for further details.

As a result of these transactions and the Company's restructuring plans, the Company is now focused on the development of inclisiran as a transformative treatment for ASCVD.

2. Significant Accounting Policies

The Company's significant accounting policies are described in Note 2, "Significant Accounting Policies," in the notes to the audited consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017 (the 2017 Form 10-K).

Basis of Presentation

The accompanying condensed consolidated financial statements are unaudited and have been prepared in accordance with accounting principles generally accepted in the United States (GAAP) for interim financial information and with the instructions to Form 10-Q. Accordingly, they do not include all the information and footnotes required by GAAP for complete financial

statements. In the opinion of management, the accompanying unaudited condensed consolidated financial statements include all adjustments, consisting solely of normal recurring adjustments, considered necessary for a fair presentation of the Company's financial position, results of operations, comprehensive income (loss), and cash flows for the periods presented.

The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly owned and majority owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation. The Company has no unconsolidated subsidiaries.

The Company's results of operations for the three months ended March 31, 2018 are not necessarily indicative of the results that may be expected from the Company for the entire fiscal year or any other quarter of the fiscal year ending December 31, 2018. These unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements included in the 2017 Form 10-K.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs, expenses and accumulated other comprehensive loss that are reported in the condensed consolidated financial statements and accompanying disclosures. Actual results may be different.

Revenue Recognition

On January 1, 2018, the Company adopted the Financial Accounting Standards Board (FASB)'s new accounting standard that amends prior guidance for the recognition of revenue from contracts with customers to transfer goods and services by using the modified-retrospective method applied to those contracts that were not completed as of January 1, 2018. The results for the reporting period beginning on January 1, 2018, are presented in accordance with the new standard, although comparative information has not been restated and continues to be reported under the accounting standards and policies in effect for those periods as described in Note 2, "Significant Accounting Policies," in the notes to the audited consolidated financial statements included in the 2017 Form 10-K. Upon adoption, the Company recorded a net increase of $0.2 million to accumulated deficit on its condensed consolidated balance sheet due to the cumulative impact of adopting the new standard, with the impact due to the acceleration of deferred revenue offset by the recognition of the related product costs that were previously classified within prepaid expenses and other current assets on the Company's consolidated balance sheets. The adoption of this new standard had an immaterial impact on the Company's reported total revenues as compared to what reported amounts would have been under the prior standard, and the impact of adoption in future periods is expected to be immaterial. The Company's accounting policies under the new standard were applied prospectively and are noted below.

The Company distributes branded Angiomax in the United States through a sole source distribution model with Integrated Commercialization Solutions (ICS). ICS then primarily sells branded Angiomax to a limited number of national medical and pharmaceutical wholesalers with distribution centers located throughout the United States. The Company's agreement with ICS provides that ICS will be the Company's exclusive distributor of branded Angiomax in the United States. Under the terms of this fee-for-service agreement, ICS places orders with the Company for sufficient quantities to maintain an appropriate level of inventory based on the Company's customers' historical purchase volumes. ICS assumes all credit and inventory risks, is subject to the Company's standard return policy and has sole responsibility for determining the prices at which it sells these products, subject to specified limitations in the agreement. The agreement terminates on February 28, 2019 and will automatically renew for additional one-year periods unless either party gives notice at least 90 days prior to the automatic extension. Either party may terminate the agreement at any time and for any reason upon 180 days' prior written notice to the other party. Effective July 2, 2015, the Company entered into a supply and distribution agreement with Sandoz under which it has granted Sandoz the exclusive right to sell in the United States an authorized generic of Angiomax (bivalirudin).

Revenue is recognized upon transfer of control of a product to the customer, generally upon delivery, based on an amount that reflects the consideration the Company expects to be entitled to, which includes estimates of variable consideration that result from rebates, wholesaler chargebacks, discounts, fee-for-service charges and returns. The Company records allowances for chargebacks and other discounts or accruals for product returns, rebates and fee-for-service charges at the time of sale, and reports revenue net of such amounts. Such amounts were not material to the Company's condensed consolidated statement of operations for the three months ended March 31, 2018.

The consideration the Company expects to be entitled to in connection with a sale of bivalirudin to Sandoz also includes a variable amount based on Sandoz's gross margin, as defined in the agreement, of bivalirudin sold by Sandoz to its customers. As

this amount is highly susceptible to factors outside of the Company's control, the Company has not recognized this variable amount. The Company recognized net revenues of $7.4 million and $14.1 million related to sales to Sandoz during the three months ended March 31, 2018 and 2017, respectively. Of the $7.4 million of net revenue recognized for the three months ended March 31, 2018, $6.2 million represents variable consideration that was constrained at January 1, 2018 upon adoption of the new accounting standard.

The Company elected to account for shipping and handling activities as a fulfillment cost rather than a separate performance obligation when those activities are performed after control of the product has been transferred to the customer. Amounts billed to customers for shipping and handling are included as part of the transaction price and recognized as revenue when control of underlying products is transferred to the customer. The related shipping and freight charges incurred by the Company are included in the cost of goods sold. Sales taxes and other similar taxes that the Company collects concurrent with revenue-producing activities are excluded from revenue.

The Company's payment terms vary by the type and location of our customer and the products or services offered. Payment terms differ by jurisdiction and customer but payment is generally required in a term ranging from 45 to 120 days from date of shipment or satisfaction of the performance obligation.

Contingencies

The Company may be, from time to time, a party to various disputes and claims arising from normal business activities. The Company continually assesses litigation to determine if an unfavorable outcome would lead to a probable loss or reasonably possible loss which could be estimated. In accordance with the guidance of the FASB on accounting for loss contingencies, the Company accrues for all contingencies at the earliest date at which the Company deems it probable that a liability has been incurred and the amount of such liability can be reasonably estimated. If the estimate of a probable loss is a range and no amount within the range is more likely than another, the Company accrues the minimum of the range. In the cases where the Company believes that a reasonably possible loss exists, the Company discloses the facts and circumstances of the litigation, including an estimable range, if possible.

Research and Development

Research and development costs are expensed as incurred. Clinical study costs are accrued over the service periods specified in the contracts and adjusted as necessary based upon an ongoing review of the level of effort and costs actually incurred. Payments for a product license prior to regulatory approval of the product and payments for milestones achieved prior to regulatory approval of the product are expensed in the period incurred as research and development. Milestone payments that do not represent payments of contingent purchase price from business combinations that are made in connection with regulatory approvals are capitalized and amortized to cost of revenue over the remaining useful life of the asset.

The Company performs research and development for U.S. government agencies under a cost-reimbursable contract in which the Company is reimbursed for direct costs incurred plus allowable indirect costs. The Company recognizes the reimbursements under research contracts when a contract has been executed, the contract price is fixed or determinable, delivery of services or products has occurred, and collection of the contract price is reasonably assured. The reimbursements are classified as an offset to research and development expenses. Payments received in advance of work performed are deferred. The Company recorded reductions of research and development expenses of $0.4 million and $0.1 million for the three months ended March 31, 2018 and 2017 , respectively, in the accompanying condensed consolidated statements of operations.

Contingent Purchase Price From Sale of Business

The Company has contingent assets for certain specified calendar year net sales milestones as part of the sale of the Hemostasis Business to Mallinckrodt and the Non-Core ACC Products to Chiesi, which in each case are reflected as contingent purchase price from sale of businesses on the accompanying condensed consolidated balance sheets. The Company also has contingent assets for royalties associated with the sale of the infectious disease business to Melinta, which is reflected as contingent purchase price from sale of business on the accompanying condensed consolidated balance sheets.

The Company will recognize any increases in the carrying amount or impairments of the contingent purchase price if and when the milestones or royalties are achieved or determined that the carrying value exceeds its fair value.

The Company noted no indicators of impairment on the carrying amount of the contingent assets. In addition, the Company determined that the fair values of these contingent payments to be received from Mallinckrodt, Chiesi and Melinta, respectively,

are not readily determinable at March 31, 2018, as the estimated future net sales of each of the respective products are determined by the future actions of such parties.

Recent Accounting Pronouncements

In January 2016 the FASB issued ASU No. 2016-01, "Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities" (ASU No. 2016-01). ASU No. 2016-01 amends certain aspects of accounting and disclosure requirements of financial instruments, including the requirement that equity investments with readily determinable fair values be measured at fair value with changes in fair value recognized in a company's results of operations. The new standard does not apply to investments accounted for under the equity method of accounting or those that result in consolidation of the investee. Equity investments that do not have readily determinable fair values may be measured at fair value or at cost minus impairment adjusted for changes in observable prices. A financial liability that is measured at fair value in accordance with the fair value option is required to be presented separately in other comprehensive income for the portion of the total change in the fair value resulting from change in the instrument-specific credit risk. In addition, a valuation allowance should be evaluated on deferred tax assets related to available-for-sale debt securities in combination with other deferred tax assets. On January 1, 2018, the Company adopted this guidance and there was no impact on the Company's condensed consolidated balance sheet as the Company did not have equity investments as of December 31, 2017. The impact that this new standard has on the Company's condensed consolidated statements of operations after adoption will depend on the changes in fair values of equity securities in the Company's portfolio in the future. See Note 6 "Cash and Cash Equivalents and Investments" for further details.

In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 842)" (ASU No. 2016-02). ASU No. 2016-02 will require organizations that lease assets with lease terms of more than 12 months to recognize assets and liabilities for the rights and obligations created by those leases on their balance sheets. The ASU will also require new qualitative and quantitative disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. ASU No. 2016-02 will be effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, with early adoption permitted. The Company expects to adopt this guidance when effective and is currently evaluating the effect that the updated standard will have on its consolidated financial statements and related disclosures.

In August 2016, the FASB issued ASU No. 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments". This guidance clarifies how certain cash receipts and payments should be presented in the statement of cash flows. On January 1, 2018, the Company adopted this standard, which did not have a material impact on the consolidated financial statements and related disclosures.

In November 2016, the FASB issued ASU 2016-18, "Statement of Cash Flows (Topic 230): Restricted Cash". This amends the guidance in ASC 230, including providing additional guidance related to transfers between cash and restricted cash and how entities present, in their statement of cash flows, the cash receipts and cash payments that directly affect the restricted cash accounts. On January 1, 2018, the Company adopted this standard and began classifying restricted cash with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts on its consolidated statements of cash flows on a retrospective basis to all periods presented. For the three months ended March 31, 2018 and 2017, $5.5 million and $5.0 million of restricted cash were classified with cash and cash equivalents on the Company's accompanying condensed consolidated statements of cash flows.

In January 2017, the FASB issued ASU 2017-01, "Business Combinations (Topic 805): Clarifying the Definition of a Business", which clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. On January 1, 2018, the Company adopted this standard prospectively. The Company applied this guidance to the sale of its infectious disease business and concluded that the infectious disease business continues to meet the definition of a business under this guidance. Therefore the adoption of this guidance did not impact the Company's accounting for the sale of the infectious disease business; however the impact on the Company's condensed consolidated financial statements will depend on the facts and circumstances of any specific future transactions.

In January 2017, the FASB issued ASU 2017-04, "Intangibles-Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment", which eliminates Step 2 from the goodwill impairment test. Under the revised test, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. This ASU is effective

for any interim or annual impairment tests for fiscal years beginning after December 15, 2019, with early adoption permitted. The Company early adopted this guidance and does not expect it will have an impact on its annual goodwill impairment test and therefore the Company does not believe that this guidance will have an impact on the consolidated financial statements and related disclosures.

3. Stock Compensation Expense

The Company recorded stock compensation expense of approximately $4.5 million and $6.6 million for the three months ended March 31, 2018 and 2017 , respectively. As of March 31, 2018, there was approximately $24.0 million of total unrecognized compensation costs related to non-vested share-based employee compensation arrangements granted under the Company's equity compensation plans. The Company expects to recognize those costs over a weighted average period of 1.2 years.

During the three months ended March 31, 2018 and 2017, the Company issued a total of 427,919 and 1,098,739, respectively, of shares of its common stock upon the exercise of stock options, grants of restricted stock, and purchases under the Company's 2010 employee stock purchase plan (ESPP). Cash received from the exercise of stock options and purchases through the ESPP during the three months ended March 31, 2018 and 2017 was $8.7 million and $24.7 million, respectively, and is included within the financing activities section of the accompanying condensed consolidated statements of cash flows.

4. Earnings (Loss) Per Share

Basic earnings (loss) per share is computed by dividing consolidated net income (loss) by the weighted average number of shares of common stock outstanding during the period, excluding unvested restricted common shares. The potentially dilutive effect of the Company's stock options, unvested restricted common stock, stock purchase warrants, and convertible senior notes due 2017 (which matured on June 1, 2017) and 2022 on earnings per share is computed under the treasury stock method. In addition, the Company analyzes the potential dilutive effect of the convertible senior notes due 2023 on earnings per share under the "if converted" method, in which it is assumed that the outstanding security converts into common stock at the beginning of the period.

For periods of income from continuing operations when the effects are not anti-dilutive, diluted earnings per share is computed by dividing consolidated net income by the weighted average number of shares outstanding and the impact of all potential dilutive common shares, consisting primarily of stock options, unvested restricted common stock, shares issuable upon conversion of convertible senior notes due 2017, 2022 and 2023 and stock purchase warrants.

For periods of loss from continuing operations, diluted loss per share is calculated similar to basic loss per share as the effect of including all potentially dilutive common share equivalents is anti-dilutive. Due to the periods of loss from continuing operations, the calculation of diluted loss per share for the three months ended March 31, 2018 excluded 8,962,583, of potentially dilutive stock options, warrants, restricted common shares, and shares issuable upon conversion of the 2022 and 2023 Notes as their inclusion would have an anti-dilutive effect.

The calculation of diluted loss per share for the three months ended March 31, 2017 excluded 15,344,008 of potentially dilutive stock options, stock purchase warrants, restricted common shares, and shares issuable upon conversion of the 2017, 2022 and 2023 Notes as their inclusion would have an anti-dilutive effect.

5. Income Taxes

For the three months ended March 31, 2018 and 2017, the Company recorded a benefit from income taxes of $18.9 million and a provision for income taxes of $0.03 million, respectively. The worldwide effective income tax rates for the Company for the three months ended March 31, 2018 and 2017 was 18.23% and (0.04)%, respectively.

For the three months ended March 31, 2018 , the Company's benefit from income taxes is primarily attributable to the utilization of current period losses against a discrete provision for income taxes of $51.1 million from the sale of the Company's infectious disease business. For further details regarding the sale of the infectious disease business see Note 15, "Discontinued Operations."

The Company considers all available evidence, both positive and negative, to determine whether, based on the weight of that evidence, a valuation allowance is needed to reduce its deferred tax assets to the amount that is more likely than not to be realized. The Company placed significant weight on the fact that the Company expects to be in a cumulative net book loss for the three-year period ending December 31, 2018 in recording valuation allowances on substantial portions of its deferred tax assets as of March 31, 2018.

The Company will continue to evaluate its ability to realize its deferred tax assets on a periodic basis and will adjust such amounts in light of changing facts and circumstances including, but not limited to, future projections of taxable income, tax legislation, rulings by relevant tax authorities, the progress of ongoing tax audits and the regulatory approval of products currently under development. Any additional changes to the valuation allowance recorded on deferred tax assets in the future would impact the Company's income taxes.

On December 22, 2017, the Tax Cuts and Jobs Act (TCJA) was enacted which significantly reforms the Internal Revenue Code of 1986, as amended. The TCJA, among other things, reduces the U.S. federal corporate tax rate from 35% to 21%, repeals the corporate alternative minimum tax (AMT), imposes additional limitations on the deductibility of interest, allows for the expensing of capital expenditures, and puts into effect the migration from a worldwide system of taxation to a territorial system. As a result of this legislation, the Company remeasured its deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%. However, the Company is still analyzing certain aspects of the TCJA and refining its calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The provisional amount recorded related to the remeasurement of the Company's deferred tax balances was $126.5 million which was offset fully by the provisional amount recorded related to the reversal of previously established valuation allowances against these deferred tax balances. The TCJA also permits any remaining AMT tax attribute carryforwards to be used to offset future taxable income and/or be refundable over the next several years. As a result, the Company recognized a provisional benefit of $4.9 million during the year ended December 31, 2017 related to the reversal of a previously established valuation allowance against its AMT tax attribute carryforwards and the related refundable amount has been classified in other assets in the accompanying consolidated balance sheet. During the three months ended March 31, 2018, the Company reduced its estimated AMT credit to be realized by $0.3 million to reflect the impact of sequestration as required by the Balanced Budget and Emergency Deficit Control Act of 1985, as amended. In addition, based on its preliminary analysis, the Company does not believe that it has offshore earnings that would be subject to the mandatory transition tax.

While the Company has completed its provisional analysis of the income tax effects of the TCJA and recorded a reasonable estimate of such effects, the amounts recorded related to the TCJA may differ, possibly materially, due to, among other things, further refinement of the Company's calculations, changes in interpretations and assumptions that the Company has made, additional guidance that may be issued by the U.S. Government, and actions and related accounting policy decisions the Company may take as a result of the TCJA. The Company will complete its analysis over a one-year measurement period ending no later than December 22, 2018, and any adjustments during this measurement period will be included in loss from continuing operations as an adjustment to income tax expense/benefit in the reporting period when such adjustments are determined.

6. Cash and Cash Equivalents and Investments

The Company considers all highly liquid investments purchased with original maturities at the date of purchase of three months or less to be cash equivalents. At March 31, 2018 and December 31, 2017, the Company had cash and cash equivalents of $216.0 million and $151.4 million, respectively, which consisted of cash of $203.8 million and $139.3 million, and money market funds with original maturities of less than three months of $12.1 million and $12.1 million at March 31, 2018 and December 31, 2017, respectively.

As of March 31, 2018, the Company's common stock investment in Melinta had a readily determinable fair value of $24.5 million. During the three months ended March 31, 2018, the Company recognized a loss of $30.0 million, all of which was unrealized, in the accompanying condensed consolidated statement of operations, relating to the Company's investment in Melinta.

Restricted Cash

The Company had restricted cash of $5.5 million at March 31, 2018 and December 31, 2017, respectively, which included $4.1 million and $1.0 million reserved for an outstanding letter of credit associated with foreign taxes and the Company's lease for the office space in Parsippany, New Jersey, respectively, at both March 31, 2018 and December 31, 2017, respectively. These funds are invested in certificates of deposit. The letter of credit for the Company's lease for the office space in Parsippany, New Jersey permits draws by the landlord to cure defaults by the Company. In addition, as a result of the acquisition of Targanta Therapeutics Corporation (Targanta) in 2009, the Company had restricted cash of $0.2 million at both March 31, 2018 and December 31, 2017, in the form of a guaranteed investment certificate collateralizing an available credit facility. The Company also had restricted cash of $0.3 million at March 31, 2018 and December 31, 2017, respectively, related to certain foreign tender requirements.

7. Fair Value Measurements

The Company applies a fair value framework in order to measure and disclose its financial assets and liabilities. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The fair value hierarchy requires an entity to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs when measuring fair value. There are three levels of inputs that may be used to measure fair value:

Level 1 Quoted prices in active markets for identical assets or liabilities. The Company's Level 1 assets consist of money market investments.

Level 2 Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Fair values are determined by utilizing quoted prices for similar assets and liabilities in active markets or other market observable inputs such as interest rates and yield curves.

Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. The Company's Level 3 liabilities consist of the contingent purchase prices associated with the Company's business combinations. The fair value of certain development or regulatory milestone based contingent purchase prices was determined in a discounted cash flow framework by probability weighting the future contractual payment with management's assessment of the likelihood of achieving these milestones and present valuing them using a risk-adjusted discount rate.

Financial assets and liabilities measured at fair value on a recurring basis

Financial assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability.

Except for the Company's Level 2 liabilities which are discussed in Note 9, "Convertible Senior Notes," the following table sets forth the Company's assets and liabilities that are measured at fair value on a recurring basis at March 31, 2018 and December 31, 2017, by level, within the fair value hierarchy:

	As of March 31, 2018				As of December 31, 2017			
Assets and Liabilities	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Balance as of March 31, 2018	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Balance as of December 31, 2017
	(in thousands)							
Assets:								
Cash equivalents	$ 12,135		$ —	$ 12,135	$ 12,100	$ —	$ —	$ 12,100
Short-term investment	24,521	—	—	24,521	—	—	—	—
Total assets at fair value	$ 36,656	$ —	$ —	$ 36,656	$ 12,100	$ —	$ —	$ 12,100
Liabilities:								
Contingent purchase price	$ —	$ —	$ 19,198	$ 19,198	$ —	$ —	$ 19,650	$ 19,650
Total liabilities at fair value	$ —	$ —	$ 19,198	$ 19,198	$ —	$ —	$ 19,650	$ 19,650

Level 3 disclosures

The Company measures contingent purchase price at fair value based on significant inputs not observable in the market, which causes it to be classified as a Level 3 measurement within the fair value hierarchy. The valuation of contingent purchase price uses assumptions and estimates the Company believes would be made by a market participant in making the same valuation. The Company assesses these assumptions and estimates on an on-going basis as additional data impacting the assumptions and estimates are obtained. Changes in the fair value of contingent purchase price related to updated assumptions and estimates are recognized within selling, general and administrative expenses in the accompanying condensed consolidated statements of operations.

The contingent purchase price may change significantly as additional data is obtained, impacting the Company's assumptions regarding probabilities of successful achievement of related milestones used to estimate the fair value of the liability. In evaluating this information, considerable judgment is required to interpret the market data used to develop the assumptions and estimates. The estimates of fair value may not be indicative of the amounts that could be realized in a current market exchange. Accordingly, the use of different market assumptions and/or different valuation techniques may have a material effect on the estimated fair value amounts, and such changes could materially impact the Company's results of operations in future periods.

The following table provides quantitative information associated with the fair value measurements of the Company's Level 3 liabilities:

	Fair Value as of March 31, 2018	Valuation Technique	Unobservable Input	Range (Weighted Average)
	(in thousands)			
Rempex:				
Contingent purchase price: Event-based milestones	$ 19,198	Probability-adjusted discounted cash flow	Probabilities of successes	18% - 100% (47%)
			Period in which milestones are expected to be achieved	2018 - 2024
			Discount rate	4.8% - 7.3%

	Fair Value as of December 31, 2017	Valuation Technique	Unobservable Input	Range (Weighted Average)
	(in thousands)			
Rempex:				
Contingent purchase price: Event-based milestones	$ 19,650	Probability-adjusted discounted cash flow	Probabilities of successes	18% - 90% (71%)
			Period in which milestones are expected to be achieved	2018 - 2024
			Discount rate	4.8% - 7.5%

The fair value of the contingent purchase price represents the fair value of the Company's liability for all potential payments under the Company's acquisition agreement for Rempex Pharmaceuticals, Inc. (Rempex). There were no changes to the potential future payments under the Company's acquisition agreement. As of March 31, 2018 the remaining potential future payments to the former equity holders of Rempex was $69.1 million which excludes future payments on products included in the sale of the Company's infectious disease business. The remaining potential future payments under the Company's acquisition agreements do not include payments of $175.8 million (which includes $86.3 million to the former equity holders of Incline and Annovation and $89.5 million to other third parties) related to the Ionsys product, which was discontinued and withdrawn in the United States in June 2017 and which has also been discontinued in Europe, and the MDCO-700 development program, which the Company discontinued in August 2017.

The significant unobservable inputs used in the fair value measurement of the Company's contingent purchase prices are the probabilities of successful achievement of development and regulatory milestones that would trigger payments under the Rempex agreement, probabilities as to the periods in which the milestones are expected to be achieved and discount rates. Significant changes in any of the probabilities of success or periods in which milestones will be achieved would result in a significantly higher or lower fair value measurement.

The changes in fair value of the Company's Level 3 contingent purchase price during the three months ended March 31, 2018 and 2017 were as follows:

	Three Months Ended March 31,	
	2018	2017
	(in thousands)	
Balance at beginning of period	$ 19,650	$ 31,832
Payments	(190)	(21,066)
Fair value adjustments to contingent purchase prices included in net loss	(262)	8,512
Balance at end of period	$ 19,198	$ 19,278

For the three months ended March 31, 2018 and 2017 , changes in the carrying value of the contingent purchase price obligations resulted from changes in the fair value of the contingent consideration due to either the passage of time, changes in discount rates, changes in probabilities of success, or milestone payments.

No other changes in valuation techniques or inputs occurred during the three months ended March 31, 2018 and 2017 .

8. Inventory

The major classes of inventory were as follows:

	March 31, 2018	December 31, 2017
	(in thousands)	
Raw materials	$ 1,161	$ 1,389
Work-in-progress	3,331	3,608
Finished goods	265	562
Total	$ 4,757	$ 5,559

The Company reviews inventory, including inventory purchase commitments, for slow moving or obsolete amounts based on expected product sales volume and provides reserves against the carrying amount of inventory as appropriate. If annual volume is less than expected, the Company may be required to make additional allowances for excess or obsolete inventory in the future.

9. Convertible Senior Notes

Convertible Senior Notes Due 2023

In June 2016, the Company issued, at par value, $402.5 million aggregate principal amount of 2.75% convertible senior notes due 2023 (the 2023 Notes). The 2023 Notes bear cash interest at a rate of 2.75% per year, payable semi-annually on January 15 and July 15 of each year, beginning on January 15, 2017. The 2023 Notes will mature on July 15, 2023. The net proceeds to the Company from the offering were $390.8 million after deducting the initial purchasers' discounts and commissions and the offering expenses payable by the Company.

The 2023 Notes are governed by an indenture (the 2023 Notes Indenture) with Wells Fargo Bank, National Association, a national banking association, as trustee (the 2023 Notes Trustee).

The 2023 Notes are senior unsecured obligations of the Company and will rank senior in right of payment to the Company's future indebtedness that is expressly subordinated in right of payment to the 2023 Notes; equal in right of payment to the Company's existing and future unsecured indebtedness that is not so subordinated; effectively junior in right of payment to any of the Company's secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all existing and future indebtedness and other liabilities (including trade payables) incurred by the Company's subsidiaries.

Holders may convert their 2023 Notes at their option at any time prior to the close of business on the business day immediately preceding April 15, 2023 only under the following circumstances:

- during any calendar quarter commencing on or after September 30, 2016 (and only during such calendar quarter), if the last reported sale price of the Company's 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;
- during the five business day period after any five consecutive trading day period (the measurement period) in which the trading price (as defined in the 2023 Notes Indenture) per $1,000 principal amount of notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such trading day;
- during any period after the Company has issued notice of redemption until the close of business on the scheduled trading day immediately preceding the relevant redemption date; or
- upon the occurrence of specified corporate events.

On or after April 15, 2023, until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their 2023 Notes at any time, regardless of the foregoing circumstances. Upon conversion, the Company will pay or deliver, as the case may be, cash, shares of the Company's common stock or a combination thereof, at the Company's

option, based upon a daily conversion value calculated on a proportionate basis for each trading day in a 50 trading day observation period (as more fully described in the 2023 Notes Indenture). The conversion rate for the 2023 Notes was initially, and remains, 20.4198 shares of the Company's common stock per $1,000 principal amount of the 2023 Notes, which is equivalent to an initial conversion price of approximately $48.97 per share of the Company's common stock.

The Company may not redeem the 2023 Notes prior to July 15, 2020. The Company may redeem for cash all or any portion of the 2023 Notes, at its option, on or after July 15, 2020 if the last reported sale price of its common stock has been at least 130% of the conversion price then in effect on the last trading day of, and for at least 19 other trading days (whether or not consecutive) during, any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which the Company provides notice of redemption, at a redemption price equal to 100% of the principal amount of the 2023 Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. No redemption date may be designated that falls on or after the 52nd scheduled trading date prior to maturity. No sinking fund is provided for the 2023 Notes, which means that the Company is not required to redeem or retire the 2023 Notes periodically.

If the Company undergoes a fundamental change (as defined in the 2023 Notes Indenture), subject to certain conditions, holders of the 2023 Notes may require the Company to repurchase for cash all or part of their 2023 Notes at a repurchase price equal to 100% of the principal amount of the 2023 Notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

The 2023 Notes Indenture governing the 2023 Notes contains customary events of default with respect to the 2023 Notes, including that upon certain events of default (including the Company's failure to make any payment of principal or interest on the 2023 Notes when due and payable) occurring and continuing, the 2023 Notes Trustee by notice to the Company, or the holders of at least 25% in principal amount of the outstanding 2023 Notes by notice to the Company and the 2023 Notes Trustee, may, and the 2023 Notes Trustee at the request of such holders (subject to the provisions of the 2023 Notes Indenture) shall, declare 100% of the principal of and accrued and unpaid interest, if any, on all the 2023 Notes to be due and payable. In case of certain events of bankruptcy, insolvency or reorganization, involving the Company or a significant subsidiary, 100% of the principal of and accrued and unpaid interest on the 2023 Notes will automatically become due and payable. Upon such a declaration of acceleration, such principal and accrued and unpaid interest, if any, will be due and payable immediately.

In accounting for the issuance of the 2023 Notes, the Company separated the 2023 Notes into liability and equity components. 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 carrying amount of the equity component representing the conversion option was determined by deducting the fair value of the liability component from the par value of the 2023 Notes as a whole. The excess of the principal amount of the liability component over its carrying amount, referred to as the debt discount, is amortized to interest expense over the seven-year term of the 2023 Notes. The equity component is not re-measured as long as it continues to meet the conditions for equity classification. The equity component related to the 2023 Notes is $101.0 million and is recorded in additional paid-in capital on the accompanying condensed consolidated balance sheet.

In accounting for the transaction costs related to the issuance of the 2023 Notes, the Company allocated the total costs incurred to the liability and equity components of the 2023 Notes based on their relative values. Transaction costs attributable to the liability component are amortized to interest expense over the seven-year term of the 2023 Notes, and transaction costs attributable to the equity component are netted with the equity components in stockholders' equity. Additionally, the Company initially recorded a net deferred tax liability of $33.5 million in connection with the 2023 Notes.

The 2023 Notes consist of the following:

Liability component	March 31, 2018	December 31, 2017
	(in thousands)	
Principal	$ 402,500	$ 402,500
Less: Debt discount, net[1]	(87,221)	(90,552)
Net carrying amount	$ 315,279	$ 311,948

(1) Included in the accompanying condensed consolidated balance sheets within convertible senior notes (due 2023) and amortized to interest expense over the remaining life of the 2023 Notes using the effective interest rate method.

The fair value of the 2023 Notes was approximately $387.4 million as of March 31, 2018. The Company estimates the fair value of its 2023 Notes utilizing market quotations for debt that have quoted prices in active markets. Since the 2023 Notes do not trade on a daily basis in an active market, the fair value estimates are based on market observable inputs based on borrowing rates currently available for debt with similar terms and average maturities, which are classified as Level 2 measurements within the fair value hierarchy. See Note 7, “Fair Value Measurements,” for definitions of hierarchy levels. As of March 31, 2018, the remaining contractual life of the 2023 Notes is approximately 5.3 years.

The following table sets forth total interest expense recognized related to the 2023 Notes:

	Three Months Ended March 31,	
	2018	2017
	(in thousands)	
Contractual interest expense	$ 2,767	$ 2,759
Amortization of debt discount	3,331	3,075
Total	$ 6,098	$ 5,834
Effective interest rate of the liability component	7.5%	7.5%

Capped call transactions

In June 2016, the Company entered into capped call transactions with certain counterparties of the 2023 Notes or their respective affiliates or other financial institutions. The Company used approximately $33.9 million of the net proceeds from the offering to pay the cost of the capped call transactions, which is included as a net reduction to additional paid-in capital on the accompanying condensed consolidated balance sheet.

The capped call transactions are expected to reduce the potential dilution with respect to shares of the Company’s common stock upon any conversion of the 2023 Notes and/or offset any cash payments the Company is required to make in excess of the principal amount of converted 2023 Notes, as the case may be, if the market price of the Company’s common stock is then greater than the strike price of the capped call transactions. Such reduction of potential dilution or offset of cash payments is subject to a cap based on the cap price of the capped call transactions. The cap price of the capped calls is currently $64.68.

For any conversions of the 2023 Notes prior to the close of business on the 52 nd scheduled trading day immediately preceding the stated maturity date of the 2023 Notes, including without limitation upon an acquisition of the Company or similar business combination, a corresponding portion of the capped calls will be terminated. Upon such termination, the portion of the capped calls being terminated will be settled at fair value (subject to certain limitations), as determined by the counterparties to the capped calls and no payments will be due from the Company to such counterparties. The capped calls expire on the earlier of (i) the last day on which any Convertible Securities remain outstanding and (ii) the second “Scheduled Trading Day” (as defined in the 2023 Notes Indenture) immediately preceding the “Maturity Date” (as defined in the 2023 Notes Indenture).

Convertible Senior Notes Due 2022

The 2022 Notes bear cash interest at a rate of 2.5% per year, payable semi-annually on January 15 and July 15 of each year, beginning on July 15, 2015. The 2022 Notes will mature on January 15, 2022. The net proceeds to the Company from the offering were $387.2 million after deducting the initial purchasers’ discounts and commissions and the offering expenses payable by the Company.

The 2022 Notes are governed by an indenture (the 2022 Notes Indenture) with Wells Fargo Bank, National Association, a national banking association, as trustee (the 2022 Notes Trustee).

The 2022 Notes are senior unsecured obligations of the Company and will rank senior in right of payment to the Company’s future indebtedness that is expressly subordinated in right of payment to the 2022 Notes; equal in right of payment to the Company’s existing and future unsecured indebtedness that is not so subordinated; effectively junior in right of payment to any of the Company’s secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all existing and future indebtedness and other liabilities (including trade payables) incurred by the Company’s subsidiaries.

Holders may convert their 2022 Notes at their option at any time prior to the close of business on the business day immediately preceding October 15, 2021 only under the following circumstances:

- during any calendar quarter commencing on or after March 31, 2015 (and only during such calendar quarter), if the last reported sale price of the Company's 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;

- during the five business day period after any five consecutive trading day period (the measurement period) in which the trading price (as defined in the 2022 Notes Indenture) per $1,000 principal amount of 2022 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such trading day;

- during any period after the Company has issued notice of redemption until the close of business on the scheduled trading day immediately preceding the relevant redemption date; or

- upon the occurrence of specified corporate events.

On or after October 15, 2021, until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their 2022 Notes at any time, regardless of the circumstances described above. Upon conversion, the Company will pay cash up to the aggregate principal amount of the 2022 Notes to be converted and deliver shares of its common stock in respect of the remainder, if any, of its conversion obligation in excess of the aggregate principal amount of 2022 Notes being converted, subject to a daily share cap.

The conversion rate for the 2022 Notes was initially, and remains, 29.8806 shares of the Company's common stock per $1,000 principal amount of the 2022 Notes, which is equivalent to an initial conversion price of approximately $33.47 per share of the Company's common stock.

The Company may not redeem the 2022 Notes prior to January 15, 2019. The Company may redeem for cash all or any portion of the 2022 Notes, at its option, on or after January 15, 2019 if the last reported sale price of its common stock has been at least 130% of the conversion price then in effect on the last trading day of, and for at least 19 other trading days (whether or not consecutive) during any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which the Company provides notice of redemption, at a redemption price equal to 100% of the principal amount of the 2022 Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. No sinking fund is provided for the 2022 Notes, which means that the Company is not required to redeem or retire the 2022 Notes periodically.

If the Company undergoes a "fundamental change" (as defined in the Indenture governing the 2022 Notes Indenture), subject to certain conditions, holders of the 2022 Notes may require the Company to repurchase for cash all or part of their 2022 Notes at a repurchase price equal to 100% of the principal amount of the 2022 Notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

The 2022 Notes Indenture contains customary events of default with respect to the 2022 Notes, including that upon certain events of default (including the Company's failure to make any payment of principal or interest on the 2022 Notes when due and payable) occurring and continuing, the 2022 Notes Trustee by notice to the Company, or the holders of at least 25% in principal amount of the outstanding 2022 Notes by notice to the Company and the 2022 Notes Trustee, may, and the 2022 Notes Trustee at the request of such holders (subject to the provisions of the 2022 Notes Indenture) shall, declare 100% of the principal of and accrued and unpaid interest, if any, on all the 2022 Notes to be due and payable. In case of certain events of bankruptcy, insolvency or reorganization, involving the Company or a significant subsidiary, 100% of the principal of and accrued and unpaid interest on the 2022 Notes will automatically become due and payable. Upon such a declaration of acceleration, such principal and accrued and unpaid interest, if any, will be due and payable immediately.

In accounting for the issuance of the 2022 Notes, the Company separated the 2022 Notes into liability and equity components. 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 carrying amount of the equity component representing the conversion option was determined by deducting the fair value of the liability component from the par value of the 2022 Notes as a whole. The excess of the principal amount of the liability component over its carrying amount, referred to as the debt discount, is amortized to interest expense over the seven-year term of the 2022 Notes. The equity component is not re-measured as long as it continues to meet the conditions for

equity classification. The equity component related to the 2022 Notes was $88.9 million and was recorded in additional paid-in capital on the accompanying condensed consolidated balance sheets.

In accounting for the transaction costs related to the issuance of the 2022 Notes, the Company allocated the total costs incurred to the liability and equity components of the 2022 Notes based on their relative values. Transaction costs attributable to the liability component are amortized to interest expense over the seven-year term of the 2022 Notes, and transaction costs attributable to the equity component are netted with the equity components in stockholders' equity. Additionally, the Company initially recorded a net deferred tax liability of $31.8 million in connection with the 2022 Notes.

The 2022 Notes consist of the following:

Liability component	March 31, 2018	December 31, 2017
	(in thousands)	
Principal	$ 399,997	$ 399,997
Less: Debt discount, net[1]	(59,333)	(62,747)
Net carrying amount	$ 340,664	$ 337,250

(1) Included in the accompanying condensed consolidated balance sheets within convertible senior notes (due 2022) and amortized to interest expense over the remaining life of the 2022 Notes using the effective interest rate method.

The fair value of the 2022 Notes was approximately $463.0 million as of March 31, 2018. The Company estimates the fair value of its 2022 Notes utilizing market quotations for debt that have quoted prices in active markets. Since the 2022 Notes do not trade on a daily basis in an active market, the fair value estimates are based on market observable inputs based on borrowing rates currently available for debt with similar terms and average maturities, which are classified as Level 2 measurements within the fair value hierarchy. See Note 7, "Fair Value Measurements," for definitions of hierarchy levels. As of March 31, 2018, the remaining contractual life of the 2022 Notes is approximately 3.8 years.

The following table sets forth total interest expense recognized related to the 2022 Notes:

	Three Months Ended March 31,	
	2018	2017
	(in thousands)	
Contractual interest expense	$ 2,500	$ 2,500
Amortization of debt discount	3,414	3,187
Total	$ 5,914	$ 5,687
Effective interest rate of the liability component	6.5%	6.5%

Convertible Senior Notes Due 2017

In June 2012, the Company issued, at par value, $275.0 million aggregate principal amount of 1.375% convertible senior notes due June 1, 2017 (the 2017 Notes). The 2017 Notes bore cash interest at a rate of 1.375% per year, payable semi-annually on June 1 and December 1 of each year, beginning on December 1, 2012. The 2017 Notes matured on June 1, 2017. The net proceeds to the Company from the offering were $266.2 million after deducting the initial purchasers' discounts and commissions and the offering expenses payable by the Company.

In June 2016, the Company used approximately $323.2 million of the net proceeds of the 2023 Notes to repurchase $220.0 million in aggregate principal amount of the 2017 Notes in privately negotiated transactions effected through the initial purchasers of the 2017 Notes. As part of the repurchase of the 2017 Notes, the Company settled a proportionate amount of outstanding bond hedges and warrants related to the 2017 Notes for a net cash receipt of $12.6 million.

In connection with the maturity of the 2017 Notes, the holders converted substantially all of the outstanding principal amount of the 2017 Notes, the Company paid cash to the converting 2017 Note holders equal to $55.4 million in respect of principal, interest and fractional shares on the 2017 Notes, and delivered 819,901 shares of the Company's common stock.

The following table sets forth total interest expense recognized related to the 2017 Notes:

	Three Months Ended March 31,	
	2018	2017
	(in thousands)	
Contractual interest expense	$ —	$ 189
Amortization of debt discount	—	711
Total	$ —	$ 900
Effective interest rate of the liability component	—%	6.02%

10. Accumulated Other Comprehensive Loss

The following tables provide a reconciliation of the components of accumulated other comprehensive loss , net of tax, attributable to The Medicines Company for the three months ended March 31, 2018 and 2017 :

	Three Months Ended March 31,	
	2018	2017
	Foreign currency translation adjustment	Foreign currency translation adjustment
	(in thousands)	
Balance at beginning of period	$ (5,183)	$ (5,479)
Other comprehensive loss before reclassifications	(471)	(328)
Amounts reclassified from accumulated other comprehensive income[1]	1,183	—
Total other comprehensive loss	712	(328)
Balance at end of period	$ (4,471)	$ (5,807)

(1) See Note 15, “Discontinued Operations,” for a discussion of this reclassification of foreign currency translation adjustment.

11. Segment and Geographic Information

The Company manages its business and operations as one segment and is focused on inclisiran as a transformative treatment for ASCVD. The Company allocates resources and assesses financial performance on a consolidated basis. Revenues reported below are derived primarily from sales of Angiomax in the United States.

The geographic segment information provided below is classified based on the major geographic regions in which the Company operates. Long-lived assets are comprised of the Company’s noncurrent assets.

	Three Months Ended March 31,			
	2018		2017	
	($ in thousands)			
Net revenues:				
United States	$ 7,202	92.7%	$ 15,405	88.2%
Europe	294	3.8%	1,895	10.9%
Rest of world	275	3.5%	165	0.9%
Total net revenues	$ 7,771	100%	$ 17,465	100%

	March 31, 2018		December 31, 2017	
	($ in thousands)			
Long-lived assets:				
United States	$ 577,782	99.9%	$ 308,843	99.7%
Europe	321	0.1%	836	0.3%
Total long-lived assets	$ 578,103	100.0%	$ 309,679	100.0%

12. Contingencies

The Company may be, from time to time, a party to various disputes and claims arising from normal business activities. The Company accrues for loss contingencies when available information indicates that it is probable that a liability has been incurred and the amount of such loss can be reasonably estimated. In the cases where the Company believes that a reasonably possible loss exists, the Company discloses the facts and circumstances of the litigation, including an estimable range, if possible.

The Company is currently party to the legal proceedings described in Part II, Item 1, Legal Proceedings, of this Quarterly Report on Form 10-Q, which include patent litigation matters and litigation related to a license agreement. The Company has assessed such legal proceedings and recorded a loss contingency of $5.2 million as a result of settlement of the Biogen matter discussed therein. For all other matters the Company does not believe that it is probable that a liability has been incurred or that the amount of any potential liability can be reasonably estimated. As a result, the Company did not record a loss contingency related to any of these legal proceedings. Particularly with respect to the litigation related to a license agreement, the Company is presently unable to predict the outcome of such lawsuit or to reasonably estimate the possible loss, or range of potential losses, if any, related to such lawsuit. While it is not possible to determine the outcome of the matters described in Part II, Item 1, Legal Proceedings, of this Quarterly Report on Form 10-Q, the Company believes that the resolution of all such matters could have a material adverse effect on its financial condition or results of operations and cash flows.

13. Restructuring

The Company announced its intention to commence a series of workforce reductions, independent of the divestiture of the Company's infectious disease business (the "Workforce Reductions"), to improve efficiencies and better align its costs and structure. As a result of the Workforce Reductions and the infectious disease business divestiture, the Company plans to reduce its personnel to less than 60 employees. Upon signing release agreements, affected employees will receive the Company's severance package, including reduction payments and fully paid health care coverage and outplacement services for six months to a year.

The impacted employees are eligible to receive severance payments in specified amounts, health benefits and outplacement services. For the three months ended March 31, 2018, the Company recorded $0.5 million, $0.8 million and $6.0 million in cost of revenue, research and development and selling, general and administrative expenses, respectively, in the accompanying condensed consolidated statement of operations based on responsibilities of the impacted employees.

The following table sets forth details regarding the activities described above during the three months ended March 31, 2018 :

	Balance as of January 1, 2018	Expenses, Net	Cash	Noncash	Balance as of March 31, 2018
			(in thousands)		
2018 Restructuring Plan:	$ —	$ 7,268	$ —	$ (1,956)	$ 5,312

14. Related Party Transactions

Arrangements Involving our Executive Officers

In January 2018, Christopher Cox, the Company's executive vice president and chief corporate development officer, rejoined the law firm Cadwalader, Wickersham & Taft LLP (Cadwalader) as a partner. Mr. Cox remains employed with the Company and continues to lead certain company functions and initiatives, including corporate strategy, business development and investor relations. Stephen Rodin, the Company's executive vice president, general counsel and secretary, has been, and will continue to be, responsible for the retention and management of outside counsel. Since 2015, the Company has retained Cadwalader as

corporate and transactional legal counsel. The Company and Cadwalader have agreed on certain procedures to address potential conflicts that may arise out of Mr. Cox's dual roles.

15. Discontinued Operations

Sale of Infectious Disease Business

On January 5, 2018, the Company completed the sale of its infectious disease business, consisting of the products Vabomere, Orbactiv and Minocin IV and line extensions thereof, and substantially all of the assets related thereto, other than certain pre-clinical assets, to Melinta. At the completion of the sale, the Company received approximately $166.4 million and 3,313,702 shares of Melinta common stock having a market value, based on Melinta's closing share price on January 5, 2018, of approximately $54.5 million. The Company's common stock investment in Melinta was recorded as short-term investment with a readily determinable fair value at March 31, 2018 of $24.5 million on the accompanying condensed consolidated balance sheet. See Note 6 "Cash, Cash Equivalents and Investments" for further details.

In addition, the Company is entitled to receive a cash payment payable 12 months following the closing of the transaction equal to $25.0 million and a cash payment payable 18 months following the closing of the transaction equal to $25.0 million. On January 5, 2018 the fair value of such payments was approximately $45.9 million, of which $23.3 million was recorded in prepaid expenses and other current assets and $22.6 million was recorded in other assets on the accompanying condensed consolidated balance sheet. Such fair value was estimated using a discounted cash flow model and was classified as a Level 3 fair value measurement due to the use of significant unobservable inputs. See Note 7, "Fair Value Measurements," for definitions of hierarchy levels. The excess of the cash payments payable to the Company over the initial fair value is amortized to interest income over the 12 and 18 month periods using the effective interest rate method. As of March 31, 2018, the carrying amounts of these assets of $23.7 million and $24.2 million, respectively, approximate their fair value due to the short term nature of the payments.

The Company is also entitled to tiered royalty payments of 5% to 25% on worldwide net sales of (a) Vabomere and (b) Orbactiv and Minocin IV, collectively. On January 5, 2018, the fair value of these contingent payments to be received from Melinta was $246.2 million and was recorded as contingent purchase price from sale of businesses in the accompanying condensed consolidated balance sheet. Substantially all of the fair value was estimated using Monte Carlo simulation models to compute contractual payments which were present valued using a risk-adjusted discount rate. The Company classified this as a Level 3 fair value measurement due to the use of these significant unobservable inputs. See Note 7, "Fair Value Measurements," for definitions of hierarchy levels.

As a result of the transaction, the Company accounted for the assets and liabilities of the infectious disease business that were sold as held for sale at December 31, 2017.

Financial results of the infectious disease business are presented as "Income (loss) from discontinued operations, net of tax" on the accompanying condensed consolidated statements of operations for the three months ended March 31, 2018 and 2017 . Assets and liabilities of the infectious disease business to be disposed of are presented as "Current assets held for sale," and "Current liabilities held for sale," on the accompanying condensed consolidated balance sheet as of December 31, 2017.

The following table presents key financial results of the infectious disease business included in "Income (loss) from discontinued operations, net of tax" for the three months ended March 31, 2018 and 2017 .

	Three Months Ended March 31,	
	2018	2017
	(In thousands)	
Net product revenues	$ (26)	$ 6,751
Operating expenses:		
Cost of revenue	214	3,575
Research and development	412	11,983
Selling, general and administrative	3,096	22,725
Total operating expenses	3,722	38,283
Loss from operations	(3,748)	(31,532)
Gain from sale of business	168,955	—
Other expense, net	(74)	(120)
Income (loss) from discontinued operations before income taxes	165,133	(31,652)
Provision for income taxes	51,148	22
Income (loss) from discontinued operations, net of tax	$ 113,985	$ (31,674)

Cumulative translation adjustment (CTA) gains or losses of foreign subsidiaries related to divested businesses are reclassified into income once the liquidation of the respective foreign subsidiaries is substantially complete. At the completion of the sale of the infectious disease business, the Company reclassified $1.2 million of CTA gains from accumulated comprehensive loss to the Company's results of discontinued operations. This amount was included in gain from sale of business for the quarter ended March 31, 2018.

Disposition related costs during the three months ended March 31, 2018 of approximately $11.9 million for advisory, legal and regulatory fees incurred in connection with the sale of the infectious disease business were recorded in the gain from the sale of the business.

The following table presents the major classes of assets and liabilities at December 31, 2017 related to the infectious disease business which were reclassified as held for sale:

	December 31, 2017
	(In thousands)
Assets:	
Accounts receivable, net	$ 9,595
Inventory	41,412
Other receivables	2,740
Intangibles, net	282,398
Goodwill	55,057
Total assets held for sale	$ 391,202
Liabilities:	
Accounts payable	$ 1,127
Accrued expenses	22,945
Contingent purchase price	35,785
Deferred revenue	723
Total liabilities held for sale	$ 60,580

Depreciation and amortization was ceased upon determination that the held for sale criteria were met in the fourth quarter of 2017. The significant cash flow items from discontinued operations for the three months ended March 31, 2018 and 2017 were as follows:

	Three months ended March 31,	
	2018	2017
	(In thousands)	
Amortization from discontinued operations	$ —	$ 1,983
Changes in contingent purchase price	—	7,821
Gain on sale of business	(168,955)	—
Proceeds from sale of business	166,383	—
Payments on contingent purchase price	—	(21,066)

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

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and accompanying notes included elsewhere in this Quarterly Report on Form 10-Q. In addition to the historical information, the discussion in this Quarterly Report on Form 10-Q contains certain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated by the forward-looking statements due to our critical accounting estimates discussed below and important factors set forth in this Quarterly Report on Form 10-Q, including under "Risk Factors" in Part II, Item 1A of this Quarterly Report on Form 10-Q.

Overview

Our Business

We are a biopharmaceutical company driven by our purpose to solve major medical, societal and economic challenges in healthcare. We have a singular and relentless focus on one of the greatest global healthcare challenge and burden - that presented by atherosclerotic cardiovascular disease, or ASCVD, which remains the number one cause of death in the United States and worldwide. We take on that challenge by developing inclisiran, the investigational RNA interference therapeutic, that specifically inhibits production of PCSK9, a key protein that controls LDL-cholesterol, or LDL-C, levels. We believe inclisiran is uniquely suited to make a significant difference reducing risk in ASCVD. We have the right to develop, manufacture and commercialize inclisiran under our collaboration agreement with Alnylam Pharmaceuticals, Inc., or Alnylam. In addition, we market Angiomax® (bivalirudin) in the United States primarily through a supply and distribution agreement with Sandoz Inc., or Sandoz, under which we granted Sandoz the exclusive right to sell in the United States an authorized generic of Angiomax.

On November 3, 2015, we announced that we were in the process of evaluating our operations with a goal of unlocking and maximizing stockholder value. In particular, we stated our intention was to explore strategies for optimizing our capital structure and liquidity position and to narrow our operational focus by strategically separating non-core businesses and products in order to generate non-dilutive cash and reduce associated cash burn and capital requirements.

As a result of our decision to narrow our operational focus, we have completed the following transactions:

- On February 1, 2016, we completed the sale of our hemostasis portfolio, consisting of PreveLeak, Raplixa and Recothrom, to wholly owned subsidiaries of Mallinckrodt plc, or Mallinckrodt. At the completion of the sale, we received approximately $174.1 million in cash, and may receive up to an additional $235.0 million in the aggregate following the achievement of certain specified calendar year net sales milestones with respect to net sales of PreveLeak and Raplixa.

- On June 21, 2016, we completed the sale of Cleviprex, Kengreal and rights to Argatroban for Injection, which we refer to collectively as Non-Core ACC Assets, to Chiesi USA, Inc., or Chiesi USA, and its parent company Chiesi Farmaceutici S.p.A., or Chiesi. At the completion of the sale, we received approximately $263.8 million in cash, which included the value of product inventory, and may receive up to an additional $480.0 million in the aggregate

following the achievement of certain specified calendar year net sales milestones with respect to net sales of each of Cleviprex and Kengreal.

- On January 5, 2018, we completed the sale of our infectious disease portfolio, consisting of the products Vabomere, Orbactiv and Minocin IV and line extensions thereof, and substantially all of the assets related thereto, other than certain pre-clinical assets, to Melinta Therapeutics, Inc., or Melinta. At the completion of the sale, we received approximately $166.4 million and 3,313,702 shares of Melinta common stock having a market value, based on Melinta's closing share price on January 5, 2018, of approximately $54.5 million. In addition, we are entitled to receive (i) a cash payment payable 12 months following the closing of the transaction equal to $25 million; (ii) a cash payment payable 18 months following the closing of the transaction equal to $25 million; and (iii) tiered royalty payments of 5% to 25% on worldwide net sales of (a) Vabomere and (b) Orbactiv and Minocin IV, collectively.

Consistent with our intentions announced in November 2015, in January 2017 we announced that we were seeking opportunities to partner or divest Ionsys (fentanyl iontophoretic transdermal system). Although we continue to seek a partnership or divestiture transaction for Ionsys, in June 2017 we commenced a voluntary discontinuation and withdrawal of Ionsys from the market and ceased related commercialization activities, with the regulatory authorizations for Ionsys remaining open. Concurrent with this market withdrawal, we commenced implementation of a workforce reduction, which resulted in the reduction of 57 employees, representing approximately 15% of our workforce. Our workforce reductions are described in more detail below. In addition, in August 2017, we announced that we are discontinuing the clinical development program for MDCO-700, an investigational anesthetic agent.

As a result of these transactions, we are now focused on the development of inclisiran as a transformative treatment for ASCVD.

Our revenues to date have been generated primarily from sales of Angiomax in the United States. In the three months ended March 31, 2018, we had net revenues of approximately $7.7 million primarily related to the authorized generic sales of Angiomax (bivalirudin) to Sandoz. During this period, net revenues from Angiomax decreased by $9.6 million from three months ended March 31, 2017. We expect that net revenues from sales of Angiomax will continue to decline in 2018 and in future years due to competition from generic versions of Angiomax following the loss of market exclusivity in the United States in July 2015 and in Europe in August 2015. Based on our current business, we expect to incur net losses for the foreseeable future.

Cost of revenues represents expenses in connection with contract manufacture of our products sold and logistics, product costs, royalty expenses and amortization of the costs of license agreements, amortization and impairments of product rights and other identifiable intangible assets from product and business acquisitions and expenses related to excess inventory. Research and development expenses represent costs incurred for licenses of rights to products, clinical trials, nonclinical and preclinical studies, regulatory filings and manufacturing development efforts. We outsource much of our clinical trials, nonclinical and preclinical studies and all of our manufacturing development activities to third parties to maximize efficiency and minimize our internal overhead. We expense our research and development costs as they are incurred. Selling, general and administrative expenses consist primarily of salaries and related expenses, costs associated with general corporate activities, changes in fair value of contingent purchase price obligations related to our acquisitions, and costs associated with marketing and promotional activities. Research and development expense, selling, general and administrative expense and cost of revenue also include share-based compensation expense, which we allocate based on the responsibilities of the recipients of the share-based compensation.

Business Development Activity

Sale of Infectious Disease Products. On January 5, 2018, we completed the sale of our infectious disease portfolio, consisting of the products Vabomere, Orbactiv and Minocin IV and line extensions thereof, and substantially all of the assets related thereto, other than certain pre-clinical assets, to Melinta. At the completion of the sale, we received approximately $166.4 million and 3,313,702 shares of Melinta common stock having a market value, based on Melinta's closing share price on January 5, 2018, of approximately $54.5 million. In addition, we are entitled to receive (i) a cash payment payable 12 months following the closing of the transaction equal to $25 million; (ii) a cash payment payable 18 months following the closing of the transaction equal to $25 million; and (iii) tiered royalty payments of 5% to 25% on worldwide net sales of (a) Vabomere and (b) Orbactiv and Minocin IV, collectively.

Sale of Non-Core Cardiovascular Products. On June 21, 2016, we completed the sale of our Non-Core ACC Assets to Chiesi USA and Chiesi. Under the terms of the purchase and sale agreement, Chiesi and Chiesi USA acquired Cleviprex, Kengreal and rights to Argatroban for Injection and related assets, and assumed substantially all of the liabilities arising out of the operation of the businesses and the acquired assets after closing, including any obligations with respect to future milestones relating to Cleviprex, Kengreal and rights to Argatroban for Injection. At the completion of the sale, we received approximately $263.8 million in cash, which included the value of product inventory, and may receive up to an additional $480.0 million in the aggregate following the

achievement of certain specified calendar year net sales milestones with respect to net sales of each of Cleviprex and Kengreal. As part of the transaction to sell Non-Core ACC Assets, we sublicensed to Chiesi all of our rights to Cleviprex and Kengreal under our license from AstraZeneca. Subsequent to the completion of the sale, these sublicenses from us to Chiesi were terminated, Chiesi purchased from AstraZeneca all or substantially all of AstraZeneca's assets relating to Cleviprex and Kengreal, the parties released certain claims against one another, and we paid Chiesi $7.5 million.

Sale of Hemostasis Business. On February 1, 2016, we completed the sale of our hemostasis business, consisting of PreveLeak, Raplixa and Recothrom products to wholly-owned subsidiaries of Mallinckrodt plc, or Mallinckrodt. Under the terms of the purchase and sale agreement, Mallinckrodt acquired all of the outstanding equity of Tenaxis Medical, Inc. and ProFibrix B.V. and assets exclusively related to the Recothrom product. Mallinckrodt assumed all liabilities arising out of Mallinckrodt's operation of the businesses and the acquired assets after closing, including all obligations with respect to milestones relating to the PreveLeak and Raplixa products. At the completion of the sale, we received approximately $174.1 million in cash from Mallinckrodt, and may receive up to an additional $235.0 million in the aggregate following the achievement of certain specified calendar year net sales milestones with respect to net sales of PreveLeak and Raplixa. The amount paid at closing was subject to a post-closing purchase price adjustment process with respect to the Recothrom inventory and the net working capital of the hemostasis business as of the date of the closing.

Alnylam License Agreement. In February 2013, we entered into a license and collaboration agreement with Alnylam to develop, manufacture and commercialize therapeutic products targeting the human proprotein convertase subtilisin/kexin type 9, or PCSK9, gene based on certain of Alnylam's RNA interference technology. Under the terms of the agreement, we obtained the exclusive, worldwide right under Alnylam's technology to develop, manufacture and commercialize PCSK9 products for the treatment, palliation and/or prevention of all human diseases. We paid Alnylam $25.0 million in an initial license payment and agreed to pay up to $180.0 million in success-based development, regulatory and commercialization milestones. In December 2014, we paid a development milestone payment of $10.0 million based upon the initiation of a Phase 1 clinical trial for inclisiran and in January 2018 we paid a development milestone payment of $20.0 million based upon the initiation of our phase 3 study for inclisiran. In addition, Alnylam will be eligible to receive scaled double-digit royalties based on annual worldwide net sales of PCSK-9 products by us or our affiliates and sublicensees. Royalties to Alnylam are payable on a product-by-product and country-by-country basis until the last to occur of the expiration of patent rights in the applicable country that cover the applicable product, the expiration of non-patent regulatory exclusivities for such product in such country, and the twelfth anniversary of the first commercial sale of the product in such country. The royalties are subject to reduction in specified circumstances. We are also responsible for paying royalties, and in some cases milestone payments, owed by Alnylam to its licensors with respect to intellectual property covering these products. Alnylam was responsible for developing the lead product through the end of the first Phase 1 clinical trial and to supply the lead product for the first Phase 1 clinical trial and the first phase 2 clinical trial. Alnylam will bear the costs for these activities, subject to certain caps on its costs. If Alnylam's development and supply costs exceed the applicable cap, Alnylam need not bear any additional development and supply costs except for costs directly caused by Alnylam's gross negligence and we shall have the option to assume such excess costs. We will direct and pay for all other development, manufacturing and commercialization activities under the agreement.

Workforce Restructuring

In 2017 and 2018, we conducted a series of workforce reductions, as described below. Our intention is to reduce our personnel to less than 60 employees as we announced in October 2017. Upon signing release agreements, affected employees have received, or are eligible to receive, a severance package, including reduction payments and fully paid health care coverage and outplacement services for six months to a year.

In June 2017, in connection with our voluntary discontinuation and withdrawal of Ionsys from the market in the United States, we commenced a workforce reduction, which resulted in the reduction of 57 employees, representing approximately 15% of our workforce.

Commencing in December 2017 and continuing through 2018, we are implementing a series of workforce reductions to focus on inclisiran, improve efficiencies and better align costs and structure. All employees who will be impacted by these reductions have been informed as to their respective timing of departure. Through May 8, 2018, 100 employees have been terminated and 137 employees were transferred as part of the sale of the infectious disease business unit to Melinta. An additional 40 employees will be terminated through the remainder of the year, with the vast majority by midyear. Included in the 40 employees are 23 employees based in San Diego who are working on early stage infectious disease projects. We expect to sell or spin out those assets and employees by midyear 2018. These workforce reductions are expected to reduce headcount costs included in operating expenses by approximately $74.0 million on an annualized basis.

Angiomax Developments

We sell Angiomax in the United States under our name as a branded Angiomax product, and, on July 2, 2015, entered into a supply and distribution agreement with Sandoz under which we granted Sandoz the exclusive right to sell in the United States an authorized generic of Angiomax (bivalirudin). We entered into the supply and distribution agreement as a result of the July 2, 2015 U.S. Court of Appeals for the Federal Circuit, or Federal Circuit Court, ruling against us in our patent infringement litigation with Hospira, Inc., or Hospira, with respect to U.S. Patent No. 7,582,727, or the '727 patent, and U.S. Patent No. 7,598,343, or the '343 patent, covering a more consistent and improved Angiomax drug product and the processes by which it is made. In addition to Hospira, other generic firms have entered the market. APP Pharmaceuticals LLC, or APP, through its affiliated company, Fresenius Kabi, commenced selling its generic version of Angiomax under provisions of a settlement agreement with us triggered by the Federal Circuit Court's July 2, 2015 decision in the Hospira matter. Apotex Inc. and Dr. Reddy's Laboratories have each also commenced commercialization of generic bivalirudin products upon receiving final approval if their respective ANDA filings by the FDA even though we remain in active litigation against Apotex and only recently settled with Dr. Reddy's Laboratories. In addition, Mylan Pharmaceuticals, Inc., or Mylan, commenced marketing its generic bivalirudin product following a decision by the Federal Circuit Court in Mylan's appeal that reversed an earlier district court decision that found that Mylan's ANDA product infringed all of the asserted claims of the '727 patent. In addition, in January 2018 Baxter International Inc., or Baxter, announced that the FDA approved Baxter's ready-to-use formulation of bivalirudin for use as an anticoagulant in patients undergoing percutaneous coronary intervention, or PCI.

A number of companies in addition to Hospira, Mylan, APP, Apotex Inc. and Dr. Reddy's Laboratories have filed ANDAs for their generic versions of Angiomax. In addition to the generic versions and the ready-to-use version of bivalirudin currently being sold, Angiomax could be subject to further generic competition in the United States from Teva Pharmaceuticals USA, Inc. and its affiliates, or Teva, and other generic ANDA filers that we have settled with, under the circumstances set forth in our respective settlement agreements with such parties and upon a final approval of each company's ANDA filings by the FDA. Pliva Hrvatska DOO, an affiliate of Teva, currently has tentative approval for its ANDA filing for its generic version of Angiomax. Other ANDA filers may commercialize their products 'at risk' if they receive final approval of their respective ANDA filings and are not subject to a Hatch-Waxman 30-month stay. Further, we remain in infringement litigation involving the '727 patent and '343 patent with the other ANDA filers. See Part II, Item 1. *Legal Proceedings* of this Quarterly Report on Form 10-Q for descriptions of our litigation with ANDA filers and related settlements. There can be no assurance as to the outcome of our infringement litigation. We may continue to incur further legal expenses related to these matters.

The principal patent covering Angiomax in Europe expired in August 2015. As a result, we face generic competition in Europe. We are in the process of voluntarily discontinuing and withdrawing Angiomax from the market outside of North America and ceasing related commercial activities.

Agreements with Biomedical Advanced Research and Development Authority (BARDA)

2016 BARDA OTA Agreement. In September 2016, we entered into an agreement with the Biomedical Advanced Research and Development Authority, or BARDA, of the U.S. Department of Health and Human Services, or HHS. This agreement, which we refer to as the BARDA OTA agreement, was established under HHS's Other Transaction Authority, known as OTA. Under the BARDA OTA agreement, we have the potential to receive up to $132.0 million in funding to support the development of early and late stage antibacterial candidates. The BARDA OTA agreement is a cost-sharing arrangement that consists of an initial base period and four option periods that BARDA may exercise in its sole discretion pursuant to the agreement. The BARDA OTA agreement provides for an initial commitment by BARDA of $32.0 million for the base period, and up to an additional $100.0 million if the remaining four options are exercised by BARDA. As of March 31, 2018, BARDA has committed $32.0 million for the base period and no additional options have been exercised. As of March 31, 2018, approximately $29.4 million of funds obligated during the exercised option periods remain available for reimbursement under the BARDA OTA agreement. Under this cost-sharing arrangement, we will be responsible for a portion of the costs associated with each period of work. If all option periods are exercised by BARDA, the estimated period of performance is expected to end in 2021, unless extended by the parties. Either party is entitled to terminate the agreement for convenience, in whole or in part upon 90 days written notice, and BARDA's future period obligations are subject to Congressionally approved annual appropriations. We expect to use the total award under the BARDA OTA agreement to support non-clinical development activities, non-clinical toxicology, clinical studies, manufacturing, program management, and associated regulatory activities designed to advance a portfolio of potential new antibiotic drug candidates targeting drug resistant bacteria. Under our purchase and sale agreement with Melinta, we are reasonably cooperating with Melinta to attempt to provide it access to potential BARDA funding under the BARDA OTA agreement with respect to the provisions of the BARDA OTA that are related to Vabomere.

2014 BARDA Agreement. In February 2014, our former subsidiary Rempex entered into a cost-sharing agreement with BARDA, which we refer to as the 2014 BARDA agreement. As part of the divestiture of our infectious disease portfolio to Melinta, Melinta acquired Rempex and its assets, including the 2014 BARDA agreement and any obligations under the agreement. We are in the process of working with BARDA and Melinta to transfer the 2014 BARDA agreement to Melinta.

Convertible Senior Note Offerings

2023 Notes

On June 10, 2016, we completed our private offering of $402.5 million aggregate principal amount of our 2.75% convertible senior notes due 2023, or the 2023 notes, and entered into an indenture with Wells Fargo Bank, National Association, a national banking association, as trustee, governing the 2023 notes. The net proceeds from the offering were $390.8 million, after deducting the initial purchasers' discounts and commissions and our offering expenses.

The 2023 notes bear cash interest at a rate of 2.75% per year, payable semi-annually on January 15 and July 15 of each year, beginning on January 15, 2017. The 2023 notes will mature on July 15, 2023. The 2023 notes do not contain any financial or operating covenants or any restrictions on the payment of dividends, incurrence of other indebtedness, or issuance or repurchase of securities by us.

Holders may convert their 2023 notes at their option at any time prior to the close of business on the business day immediately preceding April 15, 2023 only under the following circumstances: (1) during any calendar quarter commencing on or after September 30, 2016 (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, or measurement period, in which the trading price, as defined in the indenture governing the 2023 notes, per $1,000 principal amount of 2023 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; (3) during any period after we have issued notice of redemption until the close of business on the scheduled trading day immediately preceding the relevant redemption date; or (4) upon the occurrence of specified corporate events. On or after April 15, 2023, until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their 2023 notes at any time, regardless of the foregoing circumstances. Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election based upon a daily conversion value calculated on a proportionate basis for each trading day in a 50 trading day observation period (as more fully described in the 2023 notes indenture).

The conversion rate for the 2023 notes was initially, and remains, 20.4198 shares of our common stock per $1,000 principal amount of the 2023 notes, which is equivalent to an initial conversion price of approximately $48.97 per share of our common stock. The conversion rate and the conversion price are subject to customary adjustments for certain events, including, but not limited to, the issuance of certain stock dividends on our common stock, the issuance of certain rights or warrants, subdivisions, combinations, distributions of capital stock, indebtedness, or assets, cash dividends and certain issuer tender or exchange offers, as described in the indenture governing the 2023 notes.

We may not redeem the 2023 notes prior to July 15, 2020. We may redeem for cash all or any portion of the 2023 notes, at our option, on or after July 15, 2020 if the last reported sale price of our common stock has been at least 130% of the conversion price then in effect on the last trading day of, and for at least 19 other trading days (whether or not consecutive) during, any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which we provide notice of redemption, at a redemption price equal to 100% of the principal amount of the 2023 notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. However, no redemption date may be designated that falls on or after the 52nd scheduled trading date prior to maturity. No sinking fund is provided for the 2023 notes, which means that we are not required to redeem or retire the 2023 notes periodically.

If we undergo a fundamental change, as defined in the indenture governing the 2023 notes, subject to certain conditions, holders of the 2023 notes may require us to repurchase for cash all or part of their 2023 notes at a repurchase price equal to 100% of the principal amount of the 2023 notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date. Following certain corporate transactions that constitute a change of control, we would increase the conversion rate for a holder who elects to convert the 2023 notes in connection with such change of control in certain circumstances.

The 2023 notes are our senior unsecured obligations and will rank senior in right of payment to our future indebtedness that is expressly subordinated in right of payment to the 2023 notes; equal in right of payment to our existing and future unsecured indebtedness that is not so subordinated (including the 2022 notes); effectively junior in right of payment to any of our secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all existing and future indebtedness and other liabilities (including trade payables) incurred by our subsidiaries.

The indenture governing the 2023 notes contains customary events of default with respect to the 2023 notes, including that upon certain events of default (including our failure to make any payment of principal on the 2023 notes when due and payable or our failure to make any interest payment on the 2023 notes when due and payable and such failure continues for a period of thirty days) occurring and continuing, the trustee for the 2023 notes by notice to us, or the holders of at least 25% in principal amount of the outstanding 2023 notes by notice to us and the trustee for the 2023 notes, may, and the trustee at the request of such holders (subject to the provisions of the indenture governing the 2023 notes) shall, declare 100% of the principal of and accrued and unpaid interest, if any, on all the 2023 notes to be due and payable. In case of certain events of bankruptcy, insolvency or reorganization, involving us or a significant subsidiary, 100% of the principal of and accrued and unpaid interest on the 2023 notes will automatically become due and payable. Upon such a declaration of acceleration, such principal and accrued and unpaid interest, if any, will be due and payable immediately.

Capped Call Transactions

To minimize the impact of potential dilution upon conversion of the 2023 Notes, we entered into capped call transactions separate from the issuance of the 2023 Notes with certain counterparties. The capped calls have a strike price of $48.97 per share and a cap price of $64.68 per share and are exercisable when and if the 2023 Notes are converted. If upon conversion of the 2023 Notes, the price of our common stock is above the strike price of the capped calls, the counterparties will deliver shares of our common stock and/or cash with an aggregate value equal to the difference between the price of our common stock at the conversion date and the strike price, multiplied by the number of shares of our common stock related to the capped calls being exercised. We paid $33.9 million for these capped call transactions.

For any conversions of the 2023 Notes prior to the close of business on the 52nd scheduled trading day immediately preceding the stated maturity date of the 2023 Notes, including without limitation upon an acquisition of the Company or similar business combination, a corresponding portion of the capped calls will be terminated. Upon such termination, the portion of the capped calls being terminated will be settled at fair value (subject to certain limitations), as determined by the counterparties to the capped calls and no payments will be due from us to such counterparties. The capped calls expire on the earlier of (i) the last day on which any Convertible Securities remain outstanding and (ii) the second “Scheduled Trading Day” (as defined in the indenture) immediately preceding the “Maturity Date” (as defined in the indenture).

2022 Notes

On January 13, 2015, we completed our private offering of $400.0 million aggregate principal amount of our 2.50% convertible senior notes due 2022, or the 2022 notes, and entered into an indenture with Wells Fargo Bank, National Association, a national banking association, as trustee, governing the 2022 notes. The aggregate principal amount of 2022 notes sold reflects the exercise in full by the initial purchasers of the 2022 notes of their option to purchase up to an additional $50.0 million in aggregate principal amount of the 2022 notes. The net proceeds from the offering were $387.2 million, after deducting the initial purchasers’ discounts and commissions and our offering expenses.

The 2022 notes bear cash interest at a rate of 2.50% per year, payable semi-annually on January 15 and July 15 of each year, beginning on July 15, 2015. The 2022 notes will mature on January 15, 2022. The 2022 notes do not contain any financial or operating covenants or any restrictions on the payment of dividends, incurrence of other indebtedness, or issuance or repurchase of securities by us.

Holders may convert their 2022 notes at their option at any time prior to the close of business on the business day immediately preceding October 15, 2021 only under the following circumstances: (1) during any calendar quarter commencing on or after March 31, 2015 (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, or measurement period, in which the trading price, as defined in the indenture governing the 2022 notes, per $1,000 principal amount of 2022 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; (3) during any period after we have issued notice of redemption until the close of business on the scheduled trading day immediately preceding the relevant redemption date; or (4) upon the occurrence of specified corporate events.

On or after October 15, 2021, until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their 2022 notes at any time, regardless of the foregoing circumstances. Upon conversion, we will pay cash up to the aggregate principal amount of the 2022 notes to be converted and deliver shares of our common stock in respect of the remainder, if any, of its conversion obligation in excess of the aggregate principal amount of 2022 notes being converted, subject to a daily share cap, as described in the indenture governing the 2022 notes. Holders of 2022 notes will not receive any additional cash payment or additional shares representing accrued and unpaid interest, if any, upon conversion of a note, except in limited circumstances. Instead, accrued but unpaid interest will be deemed to be paid by the cash and shares, if

any, of our common stock, together with any cash payment for any fractional share, paid or delivered, as the case may be, upon conversion of a 2022 note.

The conversion rate for the 2022 notes was initially, and remains, 29.8806 shares of our common stock per $1,000 principal amount of the 2022 notes, which is equivalent to an initial conversion price of approximately $33.47 per share of our common stock. The conversion rate and the conversion price are subject to customary adjustments for certain events, including, but not limited to, the issuance of certain stock dividends on our common stock, the issuance of certain rights or warrants, subdivisions, combinations, distributions of capital stock, indebtedness, or assets, cash dividends and certain issuer tender or exchange offers, as described in the indenture governing the 2022 notes.

We may not redeem the 2022 notes prior to January 15, 2019. We may redeem for cash all or any portion of the 2022 notes, at our option, on or after January 15, 2019 if the last reported sale price of our common stock has been at least 130% of the conversion price then in effect on the last trading day of, and for at least 19 other trading days (whether or not consecutive) during, any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which we provide notice of redemption, at a redemption price equal to 100% of the principal amount of the 2022 notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. No sinking fund is provided for the 2022 notes, which means that we are not required to redeem or retire the 2022 notes periodically.

If we undergo a fundamental change, as defined in the indenture governing the 2022 notes, subject to certain conditions, holders of the 2022 notes may require us to repurchase for cash all or part of their 2022 notes at a repurchase price equal to 100% of the principal amount of the 2022 notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date. Following certain corporate transactions that constitute a change of control, we would increase the conversion rate for a holder who elects to convert the 2022 notes in connection with such change of control in certain circumstances.

The 2022 notes are our senior unsecured obligations and will rank senior in right of payment to our future indebtedness that is expressly subordinated in right of payment to the 2022 notes; equal in right of payment to our existing and future unsecured indebtedness that is not so subordinated (including the 2023 notes); effectively junior in right of payment to any of our secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all existing and future indebtedness and other liabilities (including trade payables) incurred by our subsidiaries.

The indenture governing the 2022 notes contains customary events of default with respect to the 2022 notes, including that upon certain events of default (including our failure to make any payment of principal or interest on the 2022 notes when due and payable) occurring and continuing, the trustee for the 2022 notes by notice to us, or the holders of at least 25% in principal amount of the outstanding 2022 notes by notice to us and the trustee for the 2022 notes, may, and the trustee at the request of such holders (subject to the provisions of the indenture governing the 2022 notes) shall, declare 100% of the principal of and accrued and unpaid interest, if any, on all the 2022 notes to be due and payable. In case of certain events of bankruptcy, insolvency or reorganization, involving us or a significant subsidiary, 100% of the principal of and accrued and unpaid interest on the 2022 notes will automatically become due and payable. Upon such a declaration of acceleration, such principal and accrued and unpaid interest, if any, will be due and payable immediately.

2017 Notes

On June 11, 2012, we completed our private offering of $275.0 million aggregate principal amount of our 1.375% convertible senior notes due 2017, or the 2017 notes. The net proceeds from the offering were $266.2 million, after deducting the initial purchasers' discounts and commissions and our offering expenses. The 2017 notes were our senior unsecured obligations and paid cash interest at a rate of 1.375% per year, payable semi-annually on June 1 and December 1 of each year. The conversion rate for the 2017 notes was 35.8038 shares of our common stock per $1,000 principal amount of 2017 notes, which is equivalent to an initial conversion price of $27.93 per share of our common stock.

In June 2016, we used approximately $323.2 million of the net proceeds of the 2023 notes to repurchase $220.0 million in aggregate principal amount of the 2017 notes in privately negotiated transactions effected through the initial purchasers of the 2017 notes. As part of the June 2016 repurchase of the 2017 notes, we settled a proportionate amount of outstanding bond hedge and warrants related to the bonds that were repurchased for a net cash receipt of $12.6 million.

The remaining 2017 notes matured on June 1, 2017. In connection with the maturity of 2017 Notes, the holders converted substantially all of the outstanding principal amount of the 2017 notes (other than $14,000 of principal amount of 2017 notes which was not converted and which amount was paid in full to the holders thereof), we paid cash to the converting 2017 note holders equal to $55.0 million in respect of principal, interest and fractional shares on the 2017 notes converted and delivered 819,901 shares of our common stock in respect of the remainder of our conversion obligation in excess of the aggregate principal amount of the 2017 notes converted.

Convertible Note Hedge and Warrant Transactions

In connection with the offering of the 2017 notes, on June 5, 2012, we entered into convertible note hedge transactions and warrant transactions with several of the initial purchasers of the 2017 notes, their respective affiliates and other financial institutions, which we refer to as the hedge counterparties. We used approximately $19.8 million of the net proceeds from the offering of the 2017 notes to pay the cost of the convertible note hedge transactions, after such cost was partially offset by the proceeds to us from the sale of warrants in the warrant transactions.

As part of the June 2016 repurchase of $220.0 million in aggregate principal amount of the 2017 Notes, we settled the related hedges and warrants for a net cash receipt of $12.6 million. On June 1, 2017, in connection with the maturity of the 2017 notes, we settled the note hedges and received from the note hedge counterparties approximately 820,000 shares of our common stock at an average price of $48.79 per share. The redemption offset the dilution with respect to the 819,901 shares of our common stock that were issued upon the conversion of the 2017 notes. The shares delivered to us in connection with the redemption of the 2017 note hedges are held by us as treasury shares. The remaining warrants, which were settled in December 2017, and the concurrent redemption of the note hedges, provide the holders the right to purchase up to approximately two million shares of our common stock, subject to customary antidilution adjustments, at a strike price of $34.20 per share. The warrants had a dilutive effect with respect to our common stock to the extent that the market price per share of our common stock, as measured under the terms of the warrants, exceeds the applicable strike price. The warrants were net-settled issuing common stock. The holders of the 2017 Warrants exercised 787,680 warrants on a net basis and as a result we issued 44,283 shares of common stock.

U.S. Healthcare Reform

In March 2010, President Obama signed into law the Patient Protection and Affordable Care Act, or PPACA, which was amended by the Health Care and Education Reconciliation Act of 2010. The PPACA, as amended, contains numerous provisions that impact the pharmaceutical and healthcare industries and it empowers the Department of Health and Human Services, or HHS, to implement a number of related healthcare reform measures that are likely to have a broad impact on the pharmaceutical and healthcare industry. We are continually evaluating the impact of the PPACA and other healthcare reform-related programs and regulations on our business, including potential PPACA repeal and replacement. As of the date of this Quarterly Report on Form 10-Q, we have not identified any provisions that currently materially impact our business and results of operations. However, the potential impact of the PPACA and other healthcare reform measures on our business and results of operations is inherently difficult to predict because many of the details regarding the implementation of this legislation have not been determined. In addition, the impact on our business and results of operations may change as and if our business evolves. On December 22, 2017, Congress passed and President Trump signed a bill entitled “To provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018,” which, among other things, repealed the PPACA individual mandate. President Trump and HHS Secretary Azar have announced support for regulatory provisions that would limit PPACA and a number of healthcare reform programs initiated under the Obama administration. It remains unclear whether replacement programs will include similar limitations affecting reimbursement, although scrutiny over drug pricing and government costs is expected to continue. Similarly, efforts in Congress to reform Medicare and Medicaid may impact the pharmaceutical and healthcare industries.

Results of Operations

Three Months Ended March 31, 2018 Compared to Three Months Ended March 31, 2017

Net Revenues:

Net revenues decreased 55.5% to $7.8 million for the three months ended March 31, 2018 as compared to $17.5 million for the three months ended March 31, 2017.

	Three Months Ended March 31,			
	2018	2017	Change $	Change %
	(in thousands)			
Net revenues	$ 7,771	$ 17,465	$ (9,694)	(55.5)%

The following table reflects the components of net revenues for the three months ended March 31, 2018 and 2017 :

	Three Months Ended March 31,			
	2018	2017	Change $	Change %
	(in thousands)			
Angiomax	$ 7,693	$ 17,255	$ (9,562)	(55.4)%
Other products	78	210	(132)	(62.9)%
Net revenues	$ 7,771	$ 17,465	$ (9,694)	(55.5)%

Angiomax. Net revenues from sales of Angiomax decreased by $9.6 million, or 55.4%, to $7.7 million in the three months ended March 31, 2018 compared to $17.3 million in the three months ended March 31, 2017 . The decrease in the three months ended March 31, 2018 was attributed to reductions in volume and price due to an increase in the number of generic versions of bivalirudin in the United States.

Other Products. Net revenues from sales of Ionsys decreased by approximately $0.1 million, or 62.9%, as a result of the discontinuation and market withdrawal that commenced in June 2017.

Cost of Revenues:

Cost of revenues for the three months ended March 31, 2018 was $2.7 million, or 35.2% of net revenues, compared to $10.0 million, or 57.1% of net revenues, in the three months ended March 31, 2017 .

Cost of revenues during these periods consisted of:

- expenses in connection with the manufacture of our products sold, including expenses related to excess inventory offset by the positive impact of sales of previously reserved units;
- logistics costs related to Angiomax and Ionsys, including distribution, storage, and handling costs;
- royalty expenses under our agreement with Biogen Idec and Health Research Inc. related to Angiomax; and
- for the three months ended March 31, 2017 , amortization of the costs of selling rights agreements, product licenses, developed product rights and other identifiable intangible assets, which result from product and business acquisitions.

	Three Months Ended March 31,			
	2018	% of Total	2017	% of Total
	(in thousands)		(in thousands)	
Manufacturing/Logistics	$ 2,606	95.2%	$ 5,519	55.3%
Royalties	131	4.8%	384	3.8%
Impairment of inventory and amortization of acquired product rights and intangible assets	—	—%	4,075	40.9%
Total cost of revenues	$ 2,737	100.0%	$ 9,978	100.0%

Cost of revenues decreased by $7.2 million during three months ended March 31, 2018 compared to the three months ended March 31, 2017 . The decrease is mainly due to $4.4 million related to the amortization of in-process research and development, or IPR&D, and license fee and a $2.5 million decrease associated with manufacturing/logistics expenses. The decrease in amortization of IPR&D is attributed to expenses incurred during the three months ended March 31, 2017 associated with Ionsys. The IPR&D was impaired in the second quarter of 2017 and written off as a result of the discontinuation and market withdrawal of Ionsys. Manufacturing/logistics expenses decreased due to the reduction in Angiomax product sales.

Research and Development Expenses:

	Three Months Ended March 31,			
	2018	% of Total	2017	% of Total
	(in thousands)		(in thousands)	
Marketed products				
Ionsys	$ 134	0.3 %	$ 1,276	4.8 %
Angiomax	31	0.1 %	38	0.1 %
Other	(17)	— %	(161)	(0.6)%
Total marketed products	148	0.4 %	1,153	4.4 %
Research and development product candidates				
Inclisiran	36,622	90.7 %	20,512	77.6 %
Other	3,596	8.9 %	4,779	18.1 %
Total research and development product candidates	40,218	99.6 %	25,291	95.6 %
Total research and development expenses	$ 40,366	100.0 %	$ 26,444	100.0 %

Research and development expenses increased by $13.9 million during the three months ended March 31, 2018 compared to the three months ended March 31, 2017. The increase in research and development expenses during the three months ended March 31, 2018 is primarily due to costs associated with the acceleration of clinical trials for inclisiran of $16.1 million and $0.7 million due to other research and development product candidates that were not included in the sale of the infectious disease business. These increases are partially offset by decreases of $2.9 million associated with other programs discontinued or withdrawn.

Selling, General and Administrative Expenses:

	Three Months Ended March 31,			
	2018	2017	Change $	Change %
	(in thousands)			
Selling, marketing and promotional	$ 3,081	$ 14,012	$ (10,931)	(78.0)%
General corporate and administrative	25,870	26,445	(575)	(2.2)%
Total selling, general and administrative expenses	$ 28,951	$ 40,457	$ (11,506)	(28.4)%

Selling, general and administrative expenses decreased by $11.5 million during the three months ended March 31, 2018 compared to the three months ended March 31, 2017. Selling, marketing and promotional expenses decreased by $10.9 million during this period primarily due to the discontinuation and market withdrawal of Ionsys and overall shift in corporate strategy and increased focus on research and development. General corporate and administrative expenses decreased by $0.6 million during the three months ended March 31, 2018 . The decrease is primarily due adjustments to the fair value of contingent consideration due to the former equity holders of Rempex and workforce reduction costs as a result of the restructuring initiatives discussed above.

We expect our selling, general and administrative expenses will continue to decrease due to a decrease in headcount relative to 2017.

Co-promotion and License Income:

	Three Months Ended March 31,			
	2018	2017	Change $	Change %
	(in thousands)			
Co-promotion and license income	$ 228	$ 757	$ (529)	(69.9)%

Co-promotion and license income decreased by $0.5 million during the three months ended March 31, 2018 as compared to the three months ended March 31, 2017. In the three months ended March 31, 2017, license income included our agreement with SymBio Pharmaceuticals Ltd., or SymBio, which was terminated in the fourth quarter of 2017. Co-promotion and license income includes license income of $0.2 million and $0.2 million for the three months ended March 31, 2018 and 2017, respectively, under our collaboration agreement with SciClone Pharmaceuticals.

Loss on Short-term Investment:

	Three Months Ended March 31,			
	2018	2017	Change $	Change %
	(in thousands)			
Loss on short-term investment	$ (29,989)	$ —	$ (29,989)	100.0%

Loss on short-term investment of $30.0 million during the three months ended March 31, 2018 relates to the non-cash change in fair value associated with our common stock ownership in Melinta. In connection with the sale of our infectious disease business, we received 3,313,702 shares of Melinta common stock having a market value, based on Melinta's closing share price on January 5, 2018, of approximately $54.5 million. The loss on short-term investments was derived based on the market value of Melinta's common stock as of March 31, 2018.

Interest Expense:

	Three Months Ended March 31,			
	2018	2017	Change $	Change %
	(in thousands)			
Interest expense	$ 12,077	$ 12,422	$ (345)	(2.8)%

During the three months ended March 31, 2018, we recorded approximately $12.1 million in interest expense related to the 2022 Notes and 2023 Notes as compared to $12.4 million in interest expense related to the 2017 Notes and 2022 Notes during the three months ended March 31, 2017. The decrease in interest expense in the three months ended March 31, 2018 compared to the three months ended March 31, 2017 is due to the maturity of the 2017 Notes during the second quarter of 2017.

Other Income:

	Three Months Ended March 31,			
	2018	2017	Change $	Change %
	(in thousands)			
Other income	$ 2,369	$ 111	$ 2,258	2,034.2%

Other income, which is comprised of interest income related to guaranteed payments associated with the sale of our infectious disease business, interest income and gains and losses on foreign currency transactions, increased by $2.3 million during the three months ended March 31, 2018 as compared to the three months ended March 31, 2017, primarily due to the accretion related to our guaranteed payments.

Benefit from (Provision for) Income Taxes:

	Three Months Ended March 31,			
	2018	2017	Change $	Change %
	(in thousands)			
Benefit from (provision for) income taxes	$ 18,916	$ (28)	$ 18,944	*

* Represents a change in excess of 100%

For the three months ended March 31, 2018 and 2017 , we recorded a benefit for income taxes of $18.9 million and a provision for income taxes of $0.03 million, respectively. Our worldwide effective income tax rates for the three months ended March 31, 2018 and 2017 was approximately 18.2% and (0.04)%, respectively.

For the three months ended March 31, 2018 , our benefit for income taxes is primarily attributable to the utilization of current period losses against a discrete provision of $51.1 million from the sale of our infectious disease business. For further details regarding the sale of the infectious disease business see Note 15, “Discontinued Operations,” in the accompanying notes to condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

On December 22, 2017, the Tax Cuts and Jobs Act, or TCJA, was enacted which significantly reforms the Internal Revenue Code of 1986, as amended. The TCJA, among other things, reduces the U.S. federal corporate tax rate from 35% to 21%, repeals the corporate alternative minimum tax, or AMT, imposes additional limitations on the deductibility of interest, allows for the expensing of capital expenditures, and puts into effect the migration from a worldwide system of taxation to a territorial system. As a result of this legislation, we remeasured our deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%. However, we are still analyzing certain aspects of the TCJA and refining our calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The provisional amount recorded related to the remeasurement of our deferred tax balances was $126.5 million which was offset fully by the provisional amount recorded related to the reversal of previously established valuation allowances against these deferred tax balances. The TCJA also permits any remaining AMT tax attribute carryforwards to be used to offset future taxable income and/or be refundable over the next several years. As a result, we recognized a provisional benefit of $4.9 million during the year ended December 31, 2017 related to the reversal of a previously established valuation allowance against our AMT tax attribute carryforwards and the related refundable amount has been classified in other assets in the accompanying consolidated balance sheet. During the three months ended March 31, 2018, we reduced our estimate of AMT credits to be realized by $0.3 million to reflect the impact of sequestration as required by the Balanced Budget and Emergency Deficit Control Act of 1985, as amended. In addition, based on our preliminary analysis, we do not believe that we have offshore earnings that would be subject to the mandatory transition tax.

While we have completed our provisional analysis of the income tax effects of the TCJA and recorded a reasonable estimate of such effects, the amounts recorded related to the TCJA may differ, possibly materially, due to, among other things, further refinement of our calculations, changes in interpretations and assumptions that we have made, additional guidance that may be issued by the U.S. Government, and actions and related accounting policy decisions we may take as a result of the TCJA. We will complete our analysis over a one-year measurement period ending no later than December 22, 2018, and any adjustments during this measurement period will be included in loss from continuing operations as an adjustment to income tax expense/benefit in the reporting period when such adjustments are determined.

Income (Loss) from Discontinued Operations, Net Of Tax:

	Three Months Ended March 31,			
	2018	2017	Change $	Change %
	(in thousands)			
Income (loss) from discontinued operations, net of tax	$ 113,985	$ (31,674)	$ 145,659	(459.9)%

Income from discontinued operations for three months ended March 31, 2018 is attributed to the gain on the sale of our infectious disease business. For details on discontinued operations, see Note 15, “Discontinued Operations,” in the accompanying notes to condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have financed our operations principally through revenues from sales of Angiomax and our other products and the sale of common stock, convertible promissory notes and warrants. We expect revenue from sales of Angiomax will be lower in future years due to generic competition. This reduced revenue is likely to significantly impact our cash and cash equivalents and how we finance our operations. We had $216.0 million and $24.5 million in cash and cash equivalents and short term investments, respectively, as of March 31, 2018.

Cash Flows

As of March 31, 2018, we had $221.5 million in cash, cash equivalents and restricted cash as compared to $156.9 million as of December 31, 2017. The increase in cash, cash equivalents and restricted cash in the three months ended March 31, 2018 was due primarily to $166.4 million and $8.5 million of net cash provided by investing activities and financing activities, respectively, partially offset by $109.3 million of net cash used in operating activities.

Net cash used in operating activities was $109.3 million and $119.6 million for the three months ended March 31, 2018 and 2017, respectively. The cash used in operating activities during the three months ended March 31, 2018 is primarily due to decreases in non-cash items of $126.9 million, and changes in working capital items of $11.5 million partially offset by a net income of $29.1 million. Non-cash items primarily consist of gain on sale of business, loss on short-term investments, amortization of debt discount, stock compensation expense, depreciation and amortization and changes in contingent consideration obligations.

Net cash provided by investing activities was $166.4 million in the three months ended March 31, 2018 , which was due to proceeds from the sale of the infectious disease business of $166.4 million. Net cash used in investing activities was $1.3 million in the three months ended March 31, 2017 , which was due to the purchase of fixed assets.

Net cash provided by financing activities was $8.5 million in the three months ended March 31, 2018 , which was primarily due to $8.7 million of proceeds from issuance of common stock and purchases of stock under our employee stock purchase plan, partially offset by $0.2 million in payments of contingent purchase price. Net cash provided by financing activities was $15.8 million in the three months ended March 31, 2017 , which was primarily due to $24.7 million of proceeds from issuance of common stock and purchases of stock under our employee stock purchase plan, partially offset by $8.7 million in payments of contingent purchase price.

Funding Requirements

We expect to devote substantial financial resources to our research and development efforts, clinical trials, nonclinical and preclinical studies and regulatory approvals and to our commercialization and manufacturing programs associated with inclisiran. We also will require cash to pay interest on the $400.0 million aggregate principal amount of the 2022 notes and the $402.5 million aggregate principal amount of the 2023 notes, and to make principal payments on the 2022 notes and 2023 notes at maturity or upon conversion (other than the 2023 notes upon conversion, in which case we will have the option to settle entirely in shares of our common stock). In addition, as part of our business development strategy, we generally structure our license agreements and acquisition agreements so that a significant portion of the total license or acquisition cost is contingent upon the successful achievement of specified development, regulatory or commercial milestones. As a result, we will require cash to make payments upon achievement of these milestones under the license agreements and acquisition agreements to which we are a party.

As of May 8, 2018, we may have to make contingent cash payments upon the achievement of specified development, regulatory or commercial milestones of up to:

- $150.0 million for the license and collaboration agreement with Alnylam; and
- $68.7 million relating to our research and development infectious disease portfolio acquired in our Rempex acquisition (and which was not divested in the Melinta transactions).

As of May 8, 2018, our total potential milestone payment obligations related to development, regulatory and commercial milestones for our products and products in development under our license agreements and acquisition agreements, assuming all milestones are achieved in accordance with the terms of these agreements, would be approximately $218.7 million. Of this amount, approximately $48.7 million relates to development milestones, $70.0 million relates to regulatory approval milestones and $100.0

million relates to commercial milestones. These amounts do not include milestone payments of up to $175.8 million related to the Ionsys product, which was discontinued and withdrawn in the U.S. in June 2017 and which has also been discontinued in Europe, and the MDCO-700 development program, which we discontinued in August 2017.

In addition, of the total potential milestone payment obligations, based on our anticipated timeline for the achievement of development, regulatory and commercial milestones, we expect that we would make total milestone payments under our license agreements and acquisition agreements of approximately $0.5 million during the remainder of 2018. The majority of these anticipated payments for 2018 relate to the achievement of development milestones. We may pay additional milestone payments under our license agreements and acquisition agreements during 2018 if we achieve additional development, regulatory and commercial milestones during the year.

Total net revenues from sales of Angiomax were significantly lower in the year ended December 31, 2017 and the three months ended March 31, 2018 than in previous comparable periods, and we expect these revenues will decline further. These reduced revenues are likely to significantly impact our cash and cash equivalents and how we fund our future capital requirements.

We continually evaluate our liquidity requirements, capital needs and availability of resources in view of, among other things, alternative sources and uses of capital, debt service requirements, the cost of debt and equity capital and estimated future operating cash flow. We may raise additional capital; sell interests in subsidiaries or other assets, including asset sales of products or businesses that generate a material portion of our revenue; restructure or refinance outstanding debt; repurchase material amounts of outstanding debt or equity; or take a combination of such steps or other steps to increase or manage our liquidity and capital resources. Any such actions or steps could have a material effect on us.

Our future capital requirements will depend on many factors, including:

- the progress, level, timing and cost of our research and development activities related to our clinical trials and non-clinical studies with respect to inclisiran;
- whether we develop and commercialize inclisiran on our own or through licenses and collaborations with third parties and the terms and timing of such arrangements, if any;
- the extent to which our submissions and planned submissions for regulatory approval of inclisiran are approved on a timely basis, if at all;
- the decline in Angiomax sales and the extent to which sales of the authorized generic of Angiomax are generated;
- if inclisiran receives regulatory approval, the extent to which it is commercially successful;
- the extent to which we are able to realize additional funds through our sources of liquidity from the Melinta transaction;
- the continuation or termination of third-party manufacturing, distribution and sales and marketing arrangements;
- the size, cost and effectiveness of our sales and marketing programs, including scaling our operations in anticipation of a potential launch of inclisiran;
- the amounts of our payment obligations to third parties with respect to inclisiran or other assets; and
- our ability to defend and enforce our intellectual property rights.

We believe that our existing cash and cash equivalents on hand together with the cash flows we expect to generate from sales of our products and the future guaranteed payments received from Melinta due to the sale of the infectious disease business, will be sufficient to meet our anticipated funding requirements for the next twelve months.

With respect to both our short-term and long-term cash requirements, if our existing cash resources, together with cash that we generate from sales of our products and other sources, are insufficient to satisfy our product launch, research and development and other funding requirements, including obligations under our convertible notes, we will need to sell additional equity or debt securities, engage in asset sales, including asset sales of products or businesses that generate a material portion of our revenue, engage in other strategic transactions, or seek additional financing through other arrangements, any of which could be material. Any sale of additional equity or convertible debt securities may result in dilution to our stockholders. Public or private financing

may not be available in amounts or on terms acceptable to us, if at all. If we seek to raise funds through collaboration or licensing arrangements with third parties, we may be required to relinquish rights to products, products in development or technologies that we would not otherwise relinquish or grant licenses on terms that may not be favorable to us. Moreover, our ability to obtain additional debt financing may be limited by the 2022 notes and the 2023 notes, market conditions or otherwise. If we are unable to obtain additional financing or otherwise increase our cash resources, we may be required to delay, reduce the scope of, or eliminate one or more of our planned research, development and commercialization activities, which could adversely affect our business, financial condition and operating results.

Certain Contingencies

We may be, from time to time, a party to various disputes and claims arising from normal business activities. We accrue for loss contingencies when available information indicates that it is probable that a liability has been incurred and the amount of such loss can be reasonably estimated. In the cases where we believe that a reasonably possible loss exists, we disclose the facts and circumstances of the litigation, including an estimable range, if possible.

Currently, we are party to the legal proceedings described in Part II, Item 1, Legal Proceedings, of this Quarterly Report on Form 10-Q, which include patent litigation matters and litigation related to a license agreement. We have assessed such legal proceedings and recorded a loss contingency of $5.2 million as a result of settlement of the Biogen matter discussed therein. For all other matters we do not believe that it is probable that a liability has been incurred and the amount of such liability can be reasonably estimated. As a result, we have not recorded a loss contingency related to these legal proceedings. Particularly with respect to the litigation related to a Company license agreement, we are presently unable to predict the outcome of such lawsuit or to reasonably estimate the possible loss, or range of potential losses, if any, related to such lawsuit. While it is not possible to determine the outcome of the matters described in Part II, Item 1, Legal Proceedings, of this Quarterly Report on Form 10-Q, we believe it is possible that the resolution of all such matters could have a material adverse effect on our business, financial condition or results of operations.

Contractual Obligations

Our long-term contractual obligations include commitments and estimated purchase obligations entered into in the normal course of business. These include commitments related to royalties, milestone payments, option exercise and other contingent payments due under our license and acquisition agreements, purchases of inventory of our products, research and development service agreements, income tax contingencies, operating leases, selling, general and administrative obligations and increases to our restricted cash in connection with our lease of our principal office space in Parsippany, New Jersey as of March 31, 2018.

During the quarter ended March 31, 2018 there were no other material changes outside the ordinary course of business to the specified contractual obligations set forth in the contractual obligations table included in our Annual Report on Form 10-K for the year ended December 31, 2017.

Application of Critical Accounting Estimates

The discussion and analysis of our financial condition and results of operations is based on our unaudited condensed consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles, or GAAP, for interim financial information and with the instructions to Form 10-Q. Accordingly, they do not include all the information and footnotes required by GAAP for complete financial statements. The preparation of these financial statements requires us to make estimates and judgments that affect our reported assets and liabilities, revenues and expenses, and other financial information. Actual results may differ significantly from these estimates under different assumptions and conditions. In addition, our reported financial condition and results of operations could vary due to a change in the application of a particular accounting standard.

We regard an accounting estimate or assumption underlying our financial statements as a “critical accounting estimate” where:

- the nature of the estimate or assumption is material due to the level of subjectivity and judgment necessary to account for highly uncertain matters or the susceptibility of such matters to change; and
- the impact of the estimates and assumptions on financial condition or operating performance is material.

Our significant accounting policies are more fully described in Note 2, “Significant Accounting Policies,” of our unaudited condensed consolidated financial statements in this Quarterly Report on Form 10-Q and Note 2 of our audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2017. Not all of these significant accounting

policies, however, require that we make estimates and assumptions that we believe are “critical accounting estimates.” We believe that our estimates relating to revenue recognition, inventory, share-based compensation, income taxes, in-process research and development, contingent purchase price from business combinations and impairment of long-lived assets and goodwill described under the caption “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations - Application of Critical Accounting Estimates” in our Annual Report on Form 10-K for the year ended December 31, 2017 are “critical accounting estimates.” Please refer to Note 2, “Significant Accounting Policies,” in the accompanying notes to the condensed consolidated financial statements for a discussion on changes to certain accounting policies during the three months ended March 31, 2018 .

Recent Accounting Pronouncements

Refer to Note 2, “Significant Accounting Policies,” in the accompanying notes to the condensed consolidated financial statements for a discussion of recent accounting pronouncements.

Forward-Looking Information

This Quarterly Report on Form 10-Q includes forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. For this purpose, any statements contained herein regarding our strategy, future operations, financial position, liquidity, future revenue, projected costs, prospects, plans and objectives of management, other than statements of historical facts, are forward-looking statements. The words “anticipates,” “believes,” “estimates,” “expects,” “intends,” “may,” “plans,” “projects,” “will,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We cannot guarantee that we actually will achieve the plans, intentions or expectations expressed or implied in our forward-looking statements. There are a number of important factors that could cause actual results, levels of activity, performance or events to differ materially from those expressed or implied in the forward-looking statements we make. These important factors include our “critical accounting estimates” described in Part I, Item 2 of this Quarterly Report on Form 10-Q and the factors set forth under the caption “Risk Factors” in Part II, Item 1A of this Quarterly Report on Form 10-Q. Although we may elect to update forward-looking statements in the future, we specifically disclaim any obligation to do so, even if our estimates change, and readers should not rely on those forward-looking statements as representing our views as of any date subsequent to the date of this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Market risk is the risk of change in fair value of a financial instrument due to changes in interest rates, equity prices, creditworthiness, financing, exchange rates or other factors. Our primary market risk exposure relates to changes in interest rates in our cash and cash equivalents. We place our investments in high-quality financial instruments, primarily money market funds, corporate debt securities, asset backed securities and U.S. government agency notes with maturities of less than two years, which we believe are subject to limited interest rate and credit risk. We currently do not hedge interest rate exposure. At March 31, 2018, we held $216.0 million in cash and cash equivalents, which had an average interest rate of approximately 0.78%. A 10% change in such average interest rate would have had an approximate $0.2 million impact on our annual interest income. At March 31, 2018, all cash and cash equivalents were due on demand and 93% was held in the United States.

Most of our transactions are conducted in U.S. dollars. We do have certain agreements with parties located outside the United States. Transactions under certain of these agreements are conducted in U.S. dollars, subject to adjustment based on significant fluctuations in currency exchange rates. Transactions under certain other of these agreements are conducted in the local foreign currency. As of March 31, 2018, we had receivables denominated in currencies other than the U.S. dollar. A 10% change in foreign exchange rates would have had an approximate $0.1 million impact on our other income and cash.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2018. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission, or SEC. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how

well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2018, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the quarter ended March 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Part II. Other Information

Item 1. Legal Proceedings

From time to time we are party to legal proceedings in the course of our business in addition to those described below. We do not, however, expect such other legal proceedings to have a material adverse effect on our business, financial condition or results of operations.

'727 Patent and '343 Patent Litigations

Hospira, Inc.

In July 2010, we were notified that Hospira, Inc., or Hospira, had submitted two ANDAs seeking permission to market its generic version of Angiomax prior to the expiration of the '727 patent and '343 patent. On August 19, 2010, we filed suit against Hospira in the U.S. District Court for the District of Delaware for infringement of the '727 patent and '343 patent. On August 25, 2010, the case was reassigned in lieu of a vacant judgeship to the U.S. District Court for the Eastern District of Pennsylvania. Hospira's answer denied infringement of the '727 patent and '343 patent and raised counterclaims of non-infringement and invalidity of the '727 patent and '343 patent. On September 24, 2010, we filed a reply denying the counterclaims raised by Hospira. The Hospira action was consolidated for discovery purposes with the then pending and now settled cases against Teva and APP. The case was reassigned back to the U.S. District Court for the District of Delaware. A Markman hearing was held on December 5, 2012. On July 12, 2013, the district court issued its Markman decision as to the claim construction of the '727 patent and the '343 patent. The district court's decision varied from the other Markman decisions that we have received in our other patent infringement litigations. On July 22, 2013, we filed a motion for reconsideration of the district court's claim construction ruling on the grounds that the district court (i) impermissibly imported process limitations disclosed in a preferred embodiment into the claims, (ii) improperly transformed product claims into product-by-process claims, (iii) improperly rendered claim language superfluous and violated the doctrine of claim differentiation, and (iv) improperly construed limitations based on validity arguments that have not yet been presented. On August 22, 2013, the district court denied the motion for reconsideration. A three day bench trial was held in September 2013 and a post-trial briefing was completed in December 2013. On March 31, 2014, the district court issued its trial opinion. With respect to patent validity, the district court held that the '727 and '343 patents were valid on all grounds. Specifically, the district court found that Hospira had failed to prove that the patents were either anticipated and/or obvious. The district court further held that the patents satisfied the written description requirement, were enabled and were not indefinite. With respect to infringement, based on its July 2013 Markman decision, the district court found that Hospira's ANDAs did not meet the "efficient mixing" claim limitation and thus did not infringe the asserted claims of the '727 and '343 patents. The district court found that the other claim limitations in dispute were present in Hospira's ANDA products. The district court entered a final judgment on April 15, 2014. On May 9, 2014, we filed a notice of appeal to the Federal Circuit Court. On May 23, 2014, Hospira filed a notice of cross-appeal. We filed our opening appeal brief on August 13, 2014. Hospira filed its opening appeal brief on September 26, 2014 asserting that the claim constructions and non-infringement findings were correct. Hospira also sought to overturn the finding of patent validity. Briefing was completed in December 2014. An oral argument before the Federal Circuit Court was held on March 6, 2015. On July 2, 2015, the Federal Circuit Court issued an opinion finding the asserted claims of the '727 patent and '343 patent invalid under the Section 102(b) "on sale" bar. The decision was based on a finding that third-party manufacturer, Ben Venue Laboratories, "sold" manufacturing services for three validation batches to us before a critical date. On July 15, 2015, Hospira received final approval for its ANDAs. On July 31, 2015, we filed with the Federal Circuit Court a combined petition for panel rehearing and rehearing *en banc*. On August 24, 2015, the Federal Circuit Court invited Hospira to respond to the petition. On September 8, 2015, Hospira filed a response. On November 13, 2015, the Federal Circuit Court granted our petition for rehearing *en banc* and vacated its earlier July 2, 2015 decision. The Federal Circuit Court set a briefing schedule, specified specific questions to be answered, invited the DOJ to file a brief expressing the views of the United States and also invited any other amicii curiae to file briefs on the *en banc* issues raised. Hospira filed its opening brief on January 11, 2016. We filed our response on February 24, 2016 and Hospira filed its reply brief on March 10, 2016. Nine amicus briefs were filed: Department of Justice, American Intellectual Property Law Association, Intellectual Property Owners Association, a Texas law firm, Miller Patti Pershern PLLC, Pharmaceutical Research and Manufacturers of America, Biotechnology Innovation Organization, Gilead Sciences, Inc., an individual, Roberta J. Morris, Esq., and Houston Intellectual Property Law Association. The Federal Circuit Court sitting en banc heard oral argument from the parties and the government on May 5, 2016. On July 11, 2016, in an unanimous decision, the en banc Federal Circuit Court affirmed the district court holding that our transaction with Ben Venue Laboratories did not constitute an invalidating sale under the "on sale" bar. The remaining issues on appeal that were not decided by the original panel were remanded back to the same panel for consideration. In a subsequent order of July 18, 2016, the parties were directed to file new appeal briefs taking into account the en banc decision. The parties submitted revised briefs and this briefing was completed in October 2016. The Federal Circuit Court heard oral argument on December 6, 2016. On February 6, 2018, the Federal Circuit Court issued a decision affirming the district court's finding of noninfringement of the '727 patent and '343 patent and remanding the case back to the district court to determine whether there was an offer for sale of the

invention under Section 102(b). Following the mandate issuing from the Federal Circuit Court, Hospira requested the case be stayed. The request for a stay was granted on April 26, 2018. The parties submitted a joint status report by May 8, 2018.

Mylan Pharmaceuticals, Inc.

In January 2011, we were notified that Mylan Pharmaceuticals, Inc. had submitted an ANDA seeking permission to market its generic version of Angiomax prior to the expiration of the '727 patent and '343 patent. On February 23, 2011, we filed suit against Mylan Inc., Mylan Pharmaceuticals Inc. and Bioniche Pharma USA, LLC, which we refer to collectively as Mylan, in the U.S. District Court for the Northern District of Illinois for infringement of the '727 patent and '343 patent. Mylan's answer denied infringement of the '727 patent and '343 patent and raised counterclaims of non-infringement and invalidity of the '727 patent and '343 patent. On April 13, 2011, we filed a reply denying the counterclaims raised by Mylan. On May 4, 2011, the district court set a pretrial schedule. Following a joint request, the district court issued an amended scheduling order on September 22, 2011. On November 29, 2011, Mylan moved to amend its answer to add counterclaims and affirmative defenses of inequitable conduct and unclean hands. Following motion practice, the district court granted Mylan's request to add counterclaims and affirmative defenses of inequitable conduct and to add affirmative defenses of unclean hands. On March 7, 2012, we filed a reply denying these counterclaims. A Markman hearing was held on July 30, 2012. The district court issued a Markman Order on August 6, 2012. The parties have completed fact and expert discovery. On June 21, 2013, Mylan filed a summary judgment motion of non-infringement of the '727 and '343 patents and alternatively that the '727 patent was invalid. The district court's decision granted non-infringement of the '343 patent and denied the motion with respect to non-infringement and invalidity of the '727 patent. A six day trial directed to the '727 patent was completed on June 18, 2014. Post-trial briefs were filed on July 1, 2014 and July 11, 2014. On October 27, 2014, the district court issued an opinion and order finding that Mylan's ANDA product infringes all of the asserted claims of the '727 patent. The district court further found that Mylan failed to prove that the same asserted claims of the '727 patent are invalid or unenforceable. Specifically, the district court found that Mylan failed to prove its allegations of anticipation, obviousness, non-enablement and unenforceability due to inequitable conduct. On October 28, 2014 and November 13, 2014, Mylan filed Notices of Appeal to the Federal Circuit Court. On November 25, 2014, we filed a Notice of Cross Appeal of the district court's summary judgment of noninfringement of the asserted claims of the '343 patent that it had issued on December 16, 2013 and the district court's Markman Order on August 6, 2012. Appellate briefing was completed in April 2015. An oral argument before the Federal Circuit Court was scheduled for September 11, 2015. On July 29, 2015, following a Mylan motion for disposition of its appeal in view of the July 2, 2015 Hospira decision, the Federal Circuit Court granted the motion (1) reversing the district court's judgment as to the '727 patent (2) dismissing as moot our cross-appeal (3) vacating the district court's entry of an injunction, and (4) holding that each party shall bear its own costs. On August 27, 2015, we filed a petition for panel rehearing. Following the November 13, 2015 decision granting our en banc hearing request in the Hospira appeal and vacating the July 2, 2015 decision, we moved to vacate the Federal Circuit Court's July 29, 2015 Order terminating the Mylan appeal. Following briefing, the Federal Circuit Court granted our motion and reopened the appeal, vacated its July 29, 2015 Order and then stayed the Mylan appeal pending resolution of the Hospira appeal. Following the en banc decision in the Hospira appeal described above, the Federal Circuit Court lifted the stay. The Mylan appeal was ordered to be a companion appeal to the Hospira appeal and was decided by the same judges as the Hospira appeal. The parties were ordered to file new briefs incorporating the en banc decision. The parties submitted revised briefs and this briefing was completed in October 2016. The Federal Circuit Court heard oral argument on December 6, 2016. Mylan's ANDA received tentative approval from the FDA in February 2017. On April 6, 2017, the Federal Circuit issued a decision reversing the district court's finding of infringement of the '727 patent and affirming the lower court's summary judgment of non-infringement of the '343 patent. On April 7, 2017, Mylan filed an emergency motion to accelerate the time for any petition for rehearing and issuance of a mandate. On April 11, 2017, we opposed this motion and on April 12, 2017 the Federal Circuit Court denied Mylan's request. On May 5, 2017, we filed with the Federal Circuit Court a petition for rehearing or en banc review. On May 12, 2017, the Federal Circuit Court invited Mylan to respond which they did on May 19, 2017. On May 23, 2017, we filed a motion to file a reply brief. On May 30, 2017, the Federal Circuit Court denied the motion for a reply and on June 6 denied our petition for panel rehearing. The Federal Circuit Court then issued its mandate on June 13, 2017. On June 9, 2017, Mylan filed in the district court a motion to amend the court's October 27, 2014 judgment. On June 22, 2017, we filed our opposition to amend the final judgment and also moved for a new trial on the doctrine of equivalents of the '727 patent. On June 25, 2017, Mylan opposed the motion for a new trial and we filed our reply on June 26th. On June 28, 2017, the district court issued an order granting Mylan's motion to amend the final judgment and denied our motion for a new trial. The district court entered an amended final judgment on June 28, 2017. Following further briefing by the parties, on October 30, 2017 the district court determined that Mylan was the prevailing party and awarded certain court costs.

Dr. Reddy's Laboratories, Inc.

In March 2011, we were notified that Dr. Reddy's Laboratories, Ltd. and Dr. Reddy's Laboratories, Inc. had submitted an ANDA seeking permission to market its generic version of Angiomax prior to the expiration of the '727 and '343 patents. On April 28, 2011, we filed suit against Dr. Reddy's Laboratories, Ltd., Dr. Reddy's Laboratories, Inc. and Gland Pharma, Inc., which we refer to collectively as Dr. Reddy's, in the U.S. District Court for the District of New Jersey for infringement of the '727 patent and '343 patent. Dr. Reddy's answer denied infringement of the '727 patent and '343 patent and raised counterclaims of non-infringement and invalidity of the '727 patent and '343 patent. On May 11, 2012, Dr. Reddy's filed a motion for summary judgment. On October 2, 2012, the district court held oral argument on Dr. Reddy's summary judgment motion and conducted a Markman hearing. On October 15, 2012, the district court denied Dr. Reddy's summary judgment motion. A Markman decision was issued by the district court on January 2, 2013. On January 25, 2013, Dr. Reddy's filed a second summary judgment motion this time for non-infringement. At the direction of the district court, on May 13, 2013, the motion was withdrawn by Dr. Reddy's. We have pending motions seeking further fact discovery of Dr. Reddy's. The parties have yet to enter the expert phase of the case. On May 12, 2015 the district court issued a Stipulation and Order staying the case as Dr. Reddy's had yet to respond to an FDA Complete Response Letter dated December 7, 2012. In June 2016, Dr. Reddy's responded to the FDA's Complete Response Letter. As a result, following a joint submission by the parties, the district court on July 22, 2016 ordered the stay vacated and reopened discovery of Dr. Reddy's ANDA. Following the decision by the Federal Circuit in the above Mylan appeal, the district court set a schedule for the exchange of expert reports and additional fact discovery. Following settlement discussions, the case was settled and a final judgment finding the '727 and '343 patents valid, enforceable and infringed by Dr. Reddy's ANDA product was entered by the district court in December 2017. In connection with the Dr. Reddy's settlement, we entered into a license agreement with Dr. Reddy's under which Dr. Reddy's agreed to pay us a one-time license fee and we granted Dr. Reddy's a non-exclusive license under the '727 patent and '343 patent to sell a generic bivalirudin for injection product under Dr. Reddy's ANDA in the United States. The settlement documents were submitted to the FTC and DOJ in December 2017.

Sun Pharmaceutical Industries LTD

In October 2011, we were notified that Sun Pharmaceutical Industries LTD had submitted an ANDA seeking permission to market its generic version of Angiomax prior to the expiration of the '727 and '343 patents. On November 21, 2011, we filed suit against Sun Pharma Global FZE, Sun Pharmaceutical Industries LTD., Sun Pharmaceutical Industries Inc., and Caraco Pharmaceutical Laboratories, LTD., which we refer to collectively as Sun, in the U.S. District Court for the District of New Jersey for infringement of the '727 patent and '343 patent. The case has been assigned to the same judge and magistrate judge as the Dr. Reddy's action. Sun's answer denied infringement of the '727 patent and '343 patent. On June 7, 2012, the district court held an initial case scheduling conference. The parties proceeded with fact discovery. Following a December 20, 2013 status conference, the parties began discussing a stay in the case. Following further conferences with the district court a stipulation to stay the case was submitted and subsequently entered by the district court on April 1, 2014. Following settlement discussions, the case was settled and a final judgment finding the '727 and '343 patents valid, enforceable and infringed by Sun's ANDA product was entered by the district court on March 27, 2015. In connection with the Sun settlement, we entered into a license agreement with Sun under which we granted Sun a non-exclusive license under the '727 patent and '343 patent to sell a generic bivalirudin for injection product under Sun's ANDA in the United States beginning on June 30, 2019 or earlier in certain circumstances. The settlement documents were submitted to the FTC and DOJ in March 2015.

Apotex Inc.

In March 2013, we were notified that Apotex Inc. had submitted an ANDA seeking permission to market its generic version of Angiomax prior to the expiration of the '727 and '343 patents. On May 1, 2013, we filed suit against Apotex Inc. and Apotex Corp., which we refer to collectively as Apotex, in the U.S. District Court for the District of New Jersey for infringement of the '727 and '343 patents. The case has been assigned to the same judge and magistrate judge as the Dr. Reddy's and Sun actions. Apotex filed its answer on July 19, 2013 and raised counterclaims of non-infringement and invalidity. A scheduling conference before the magistrate judge was held on December 16, 2013. Following a subsequent conference on April 15, 2014 and further directions from the district court to resubmit a discovery schedule, the district court entered a revised discovery schedule on July 17, 2014. A Markman hearing commenced on January 22, 2015 and was completed on March 3, 2015. Following the July 2, 2015 Hospira decision, the parties requested and the district court entered an order staying the case until the Federal Circuit Court issues a mandate in the Hospira appeal. Following the Hospira en banc decision in July 2016, we moved the district court to lift the stay to resume fact discovery of Apotex's ANDA, which Apotex opposed. The magistrate judge granted our request and issued an order on September 13, 2016 reinstating the case and ordered certain discovery to proceed. On September 23, 2016, Apotex filed a motion to vacate the September 13th order. Oral argument on the motion was held on October 17, 2016 and the district court entered an order that ANDA discovery could proceed. In addition, in October 2016, the district court ordered Apotex to give us 10-days' notice before any at risk launch. The parties requested and the district court agreed to stay this case pending the above discussed Hospira and Mylan appeals. The district court conducted a status conference on February 6, 2018 and ordered the parties

to exchange certain documents. On May 2, 2018, the district court entered a stipulation of dismissal of the complaint and Apotex's counterclaims with prejudice.

Exela Pharma Sciences, LLC

In March 2014, we were notified that Exela Pharma Sciences, LLC, had submitted an ANDA seeking permission to market its generic version of Angiomax prior to the expiration of the '727 and '343 patents. On April 25, 2014, we filed suit against Exela Pharma Sciences, LLC, Exela PharmSci, Inc. and Exela Holdings, Inc., which we collectively refer to as Exela, in the U.S. District Court for the Western District of North Carolina for infringement of the '727 and '343 patents. Exela filed its answer on June 3, 2014 and raised counterclaims of non-infringement, invalidity and unenforceability due to inequitable conduct. We filed a reply on July 11, 2014. The parties have conducted a Rule 26 conference. The district court has set a pretrial schedule through a June 2015 Markman hearing. On November 4, 2014, Exela filed a motion for judgment on the pleadings based on noninfringement. The motion was fully briefed on December 23, 2014. Claim construction discovery was under way. Following the July 2, 2015 Hospira decision, the parties requested and the court entered an order staying the case until the Federal Circuit Court issues a mandate in the Hospira appeal. On January 29, 2016, even though no mandate from the Hospira appeal has issued, Exela filed a motion to lift the stay and resume claim construction proceedings and other pretrial matters. On February 29, 2016, the district court denied Exela's motion to lift the stay on the case. Following the Hospira en banc decision in July 2016, we moved to lift the stay. Exela opposed the motion but indicated it would agree to lift the stay under certain conditions. In a September 29, 2016 order, the magistrate judge ruled the case should remain stayed. On September 1, 2017, the case was reassigned to another judge, also of the Western District of North Carolina. Following settlement discussions, the case was settled. On March 23, 2018, the parties filed a stipulation of dismissal of all claims, counterclaims and defenses with prejudice.

Accord Healthcare Inc., USA

In June 2014, we were notified that Accord Healthcare Inc., or Accord, had submitted an ANDA seeking permission to market its generic version of Angiomax prior to the expiration of the '727 and '343 patents. On July 24, 2014, we filed suit against Accord and its parent, Intas Pharmaceuticals Ltd., or Intas, in the U.S. District Court for the Middle District of North Carolina for infringement of the '727 patent and '343 patent. On September 26, 2014, Accord and Intas filed an answer denying infringement and asserting that the '727 and '343 patents are invalid. The parties have conducted a Rule 26 conference. The district court has set February 17, 2016 for the close of all discovery and October 3, 2016 as a trial date. Following the July 2, 2015 Hospira decision, the parties requested and the district court entered an order staying the case until the Federal Circuit Court issues a mandate in the Hospira appeal. Following discussions, the parties agreed to a settlement and an order for judgment and permanent injunction was filed in February 2018, pursuant to which the parties seek a finding that the '727 and '343 patents are valid, enforceable and infringed by Accord's ANDA product. In connection with the Accord settlement, we entered into a license agreement with Accord under which Accord agreed to pay us a royalty on net sales Accord's bivalirudin product and we granted Accord a non-exclusive license under the '727 patent and '343 patent to sell a generic bivalirudin for injection product under its ANDA in the United States. The settlement documents were submitted to the FTC and DOJ in February 2018. Accord's ANDA received tentative approval from the FDA in April 2016.

Aurobindo Pharma Limited

In March 2014, we were notified that Aurobindo Pharma Limited had submitted an ANDA seeking permission to market its generic version of Angiomax prior to the expiration of the '727 and '343 patents. On April 11, 2014, we filed suit against Aurobindo Pharma Limited and Aurobindo Pharma USA, Inc., which we refer to collectively as Aurobindo, in the U.S. District Court for the District of New Jersey for infringement of the '727 and '343 patents. The case has been assigned to the same judge and magistrate judge as the Dr. Reddy's, Sun and Apotex actions. Aurobindo filed its answer on July 3, 2014 and raised counterclaims of non-infringement and invalidity. A scheduling conference before the magistrate judge was held on November 20, 2014. The parties engaged in fact discovery and claim construction exchanges. On April 6, 2015, the district court entered a revised fact and expert discovery schedule. Thereafter, the parties proposed a stay of the case pending a decision in the above-referenced Hospira appeal to the district court, which the district court entered on April 15, 2015. Following the July 2, 2015 Hospira decision, the district court was informed of the decision and the parties requested the present stay to remain in effect until Federal Circuit Court issues a mandate in the Hospira appeal. The district court entered this request on July 20, 2015. On April 27, 2017, Aurobindo filed a motion to lift the stay. We filed an opposition on May 22, 2017 and in the alternative proposed a schedule to complete fact and expert discovery. On May 30, 2017, Aurobindo filed a reply and on August 16, 2017, the district court lifted the stay. On September 8, 2017, Aurobindo filed an amended answer adding additional counterclaims and defenses. On October 6, 2017, we filed our response to these new claims. On October 9, 2017, Aurobindo filed a motion for judgment on the pleadings pursuant to Rule 12(c). Following settlement discussions, the case was settled and a final judgment finding the '727 and '343 patents valid,

enforceable and infringed by Aurobindo's ANDA product was entered by the district court on November 22, 2017. In connection with the Aurobindo settlement, we entered into a license agreement with Aurobindo under which Aurobindo agreed to pay us a royalty on net sales Aurobindo's bivalirudin product and we granted Aurobindo a non-exclusive license under the '727 patent and '343 patent to sell a generic bivalirudin for injection product under its ANDA in the United States. The settlement documents were submitted to the FTC and DOJ in November 2017. Aurobindo's ANDA received tentative approval from the FDA in December 2015.

Sagent Pharmaceuticals Inc.

In July 2015, we were notified that Sagent Pharmaceuticals Inc., or Sagent, had submitted an ANDA seeking permission to market its generic version of Angiomax prior to the expiration of the '727 patent and '343 patent. On August 26, 2015, we filed suit against Sagent in the U.S. District Court for the Northern District of Illinois for infringement of the '727 patent and '343 patent. Sagent filed its answer on November 30, 2015 and raised counterclaims of non-infringement and invalidity. We filed a reply on December 22, 2015. A scheduling conference was held on January 21, 2016. The case has been stayed pending resolution of the Hospira en banc appeal. At a September 13, 2016 status conference, the parties jointly requested the stay be lifted and discovery proceed on our claim that Sagent's ANDA infringes the '727 and '343 patents. In addition to a proposed case schedule, the parties submitted a joint partial judgment wherein Sagent acknowledged that the claims at issue in the Hospira and Mylan appeals, if found valid, will be valid in this case and Sagent's invalidity claims are dismissed with prejudice. To the extent the Federal Circuit Court in the Hospira and Mylan matters finds any claim invalid, the parties agreed that the partial judgment will be vacated. Sagent's ANDA received tentative approval in March 2015, but is subject to a Hatch-Waxman 30-month stay until 2018. Following settlement discussions, the case was settled. On December 20, 2017, the district court entered a stipulation of dismissal and judgment dismissing both the complaint and Sagent's declaratory judgment counterclaims with prejudice.

Akorn, Inc.

In October 2016, we were notified that Akorn, Inc. had submitted an ANDA seeking permission to market its generic version of Angiomax prior to the expiration of the '727 and '343 patents. On November 15, 2016, we filed suit against Akorn in the U.S. District Court for the District of New Jersey for infringement of the '727 and '343 patents. The case has been assigned to the same judge and magistrate judge as the Dr. Reddy's, Sun, Apotex and Aurobindo actions. Akorn filed its answer on December 27, 2016 and raised counterclaims of non-infringement and invalidity. A scheduling conference before the magistrate judge was scheduled for February 14, 2017. The parties jointly requested the case be stayed pending the Federal Circuit Court appeals involving the '727 and '343 patents. On January 10, 2017, the district court ordered the case stayed. The parties are engaged in court directed settlement discussions.

Biogen Idec Litigation

On September 15, 2015, Biogen Idec, notified us that after completing an audit of our books and records for the fourth quarter of 2014, Biogen Idec believed it was owed additional royalties relating to Angiomax under our license agreement with Biogen Idec. On September 23, 2015, we filed suit against Biogen Idec in the United States District Court for the District of New Jersey seeking, inter alia, declaratory judgments that we have satisfied our obligations under the license agreement. On November 12, 2015, Biogen Idec answered the complaint denying our claims and asserting counterclaims for breach of contract. In February 2017, Biogen's claim for audit costs was voluntarily dismissed. Following settlement discussions, the parties agreed to settle the case and entered into a joint stipulation and order of dismissal with prejudice. As part of the settlement, we agreed to make an upfront payment of $1.2 million upon entering into the settlement agreement and additional payments of $4 million, in the aggregate, on June 30, 2020 and June 30, 2021.

Eagle Litigation

On February 2, 2016, we filed suit against Eagle Pharmaceuticals, Inc., or Eagle, SciDose LLC and TherDose Pharma Pvt. Ltd. for infringement of U.S. Patent Nos. 7,713,928, or the '928 patent, and 7,803,762, or the '762 patent, by Eagle's New Drug Application No. 208298 for ready-to-use bivalirudin. In the lawsuit, we assert that the '928 and '762 patents are co-owned by us and Eagle and are exclusively licensed to us. The complaint also seeks a declaration that we are an owner and exclusive licensee of U.S. Patent Application No. 14/711,359 pursuant to the parties' License and Development Agreement, which Eagle represents covers the product described in its NDA No. 208298. On March 25, 2016 defendants filed a motion to dismiss. On April 18, 2016 we filed an amended complaint reasserting the original claims and raising additional claims of, inter alia, trademark

infringement, unfair competition and tortious interference. The trademark infringement claim asserts that Eagle's mark for its ready-to-use bivalirudin, Kangio, infringes our Angiomax® mark and the Kengreal® mark. On May 23, 2016 defendants filed a second motion to dismiss, which we opposed. On July 8, 2016, the Court entered a stipulation of dismissal of the trademark related claims in which defendants represented that they have abandoned their U.S. trademark applications for Kangio, they will not use the Kangio trademark in U.S. commerce for goods and services related to bivalirudin and/or anticoagulants, and that they have and/or will remove any reference to Kangio from any and all promotional and marketing material and any applicable labeling and packaging. On July 21, 2016, defendants filed a motion to bifurcate and stay our patent infringement claims. On August 18, 2016 the Court denied defendants' second motion to dismiss on all counts and on September 9, 2016 the Court denied defendants' motion to bifurcate and stay the patent infringement claims. On October 10, 2016, defendants filed a motion for summary judgment on the same grounds advanced in the motion to dismiss, which we have opposed. On March 15, 2017, the Court denied defendants' motion for summary judgment. Defendants informed us that they are prepared and will deliver to us any actual physical materials and assign any intellectual property or sNDA related to the ready-to-use bivalirudin and, on October 4, 2017, based on the argument that this offer would resolve all federal claims in dispute, defendants filed a motion to dismiss the remaining claims for lack of subject matter jurisdiction. On October 16, 2017, defendants filed a motion to stay discovery pending a resolution on their motion to dismiss. On November 6, 2017, we filed an opposition to the defendants' motion to dismiss and an opposition to defendants' motion to stay discovery. Following settlement discussions, the parties agreed to settle the case and entered into a joint stipulation and order of dismissal with prejudice pursuant to which the case was dismissed with prejudice. As part of the settlement, Eagle agreed to make a one-time payment to us and assign to us all of Eagle's respective rights, title, and interest, including intellectual property, to Eagle's sNDA No. 208298.

SymBio Arbitration

On October 11, 2017, SymBio filed a Request for Arbitration with the International Chamber of Commerce's International Court of Arbitration against us and our wholly owned subsidiary, Incline. In the Request for Arbitration, SymBio claims that we failed to provide adequate assurances of performance of, or, alternatively, have rendered ourselves unable to perform, our obligations under the license agreement between us, Incline and SymBio relating to the development and commercialization of IONSYS in Japan. As a result, SymBio seeks compensatory damages in an amount of $82 million. On December 15, 2017, we filed an Answer and Counterclaim denying SymBio's allegations, asserting defenses to SymBio's claims, and bringing a counterclaim for breach of contract. We are seeking compensatory damages in an amount of $10 million. The arbitration process is ongoing. We intend to defend ourselves vigorously in this matter and pursue all relief to which we are entitled.

Silence Therapeutics Litigation

In July 2017, Silence Therapeutics plc and Silence Therapeutics GmbH, which we refer to together as Silence, issued, and in October 2017 served, a claim in the High Court of Justice, Chancery Division, Patents Court in the United Kingdom, naming The Medicines Company UK Ltd., our wholly owned subsidiary, Alnylam and Alnylam UK Limited, as co-defendants. In Silence's claim, it seeks a determination that it is entitled to supplementary protection certificates, or SPCs, based on Silence's European Patent No. 2,258,847, or the '847 patent, and the prospective European regulatory approvals for inclisiran and for certain of Alnylam's product candidates. This is based on Silence's assertion that inclisiran and the cited Alnylam product candidates fall within the scope of the '847 patent. An SPC is an intellectual property right that could extend the life of the '847 patent in relation to a specified product for a period of up to five additional years bringing the expiration date up to 2028. In addition, Silence is seeking costs, interest and other unspecified relief. On October 31, 2017, we acknowledged service of the claim served by Silence and on November 30, 2017, submitted substantive defenses to the claim.

On October 27, 2017, we and Alnylam filed and served a claim against Silence in the High Court seeking revocation of the '847 patent, as well as a declaration of non-infringement by inclisiran and certain of Alnylam's product candidates of the '847 patent, and costs and interest among other potential remedies. On November 14, 2017, Silence filed a defense to our claim along with counterclaims alleging infringement of the '847 patent by inclisiran and certain of Alnylam's product candidates. On December 11, 2017, we filed an answer and defense to the counter claims.

The High Court has listed the trial for 10 days which is to be heard in a window starting on December 3, 2018 for all claims between Silence, Alnylam and us.

In parallel to the above High Court proceedings, on December 14, 2017 we also commenced opposition proceedings at the European Patent Office, or EPO, seeking revocation of the '847 patent. Alnylam and Sanofi have also each commenced opposition proceedings for the revocation of the '847 patent at the EPO.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below in addition to the other information included or incorporated by reference in this Quarterly Report on Form 10-Q. If any of the following risks actually occur, our business, financial condition or results of operations would likely suffer. In that case, the trading price of our common stock could decline. In addition to the risk factors identified under the captions below, the operation and results of our business are subject to risks and uncertainties identified elsewhere in this Quarterly Report on Form 10-Q as well as general risks and uncertainties such as those relating to general economic conditions and demand in the market for our products.

Risks Related to Development, Approval and Commercialization of Inclisiran

We are almost entirely dependent on the success of inclisiran, our only significant drug candidate, which is currently in Phase 3 of clinical development, and we cannot be certain that inclisiran will receive regulatory approval or be successfully commercialized even if we receive regulatory approval.

We currently only commercialize Angiomax, which is subject to generic competition, and we may never be able to develop inclisiran as a marketable product. We expect that a substantial majority of our efforts and expenditures over the next few years will be devoted to inclisiran.

Accordingly, our future business, including the ability to generate revenue, finance our operations and repay our indebtedness, depends almost entirely on the successful development, regulatory approval and commercialization of inclisiran. We cannot be certain that inclisiran will receive regulatory approval or be successfully commercialized even if we receive regulatory approval. The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of drug products are and will remain subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries that each have differing regulations. We are not permitted to market inclisiran in the United States until it receives approval of an NDA from the FDA, or in any foreign countries until they receive the requisite approval from such countries. Obtaining approval of an NDA or BLA is an extensive, lengthy, expensive and inherently uncertain process, and the FDA may delay, limit or deny approval of a drug candidate for many reasons, including:

- we may not be able to demonstrate that inclisiran is safe and effective as a treatment for our targeted indications to the satisfaction of the FDA;
- the results of our clinical trials may not meet the level of statistical or clinical significance required by the FDA for marketing approval;
- a clinical research organization, or CRO, that we retain to conduct clinical trials or any other third parties involved in the conduct of trials may take actions outside of our control that materially adversely impact our clinical trials;
- the FDA may not find the data from pre-clinical studies and clinical trials sufficient to demonstrate that the clinical and other benefits of inclisiran outweigh the safety risks;
- the FDA may disagree with our interpretation of data from our pre-clinical studies and clinical trials or may require that we conduct additional studies or trials;
- the FDA may not accept data generated at our clinical trial sites;
- if our NDA is reviewed by an advisory committee, the FDA may have difficulties scheduling an advisory committee meeting in a timely manner or the advisory committee may recommend against approval of our application or may recommend that the FDA require, as a condition of approval, additional pre-clinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions;
- the advisory committee may recommend that the FDA require, as a condition of approval, additional pre-clinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions;
- the FDA may require development of a Risk Evaluation and Mitigation Strategy as a condition to approval;

- the FDA may identify deficiencies in the manufacturing processes or facilities of our third-party manufacturers; or
- the FDA may change its approval policies or adopt new regulations.

If inclisiran gains regulatory approval, the commercial launch will require significant efforts from us. Our ability to successfully commercially launch inclisiran will depend on our ability to:

- train, deploy and support a qualified sales force to market and sell our newly launched product;
- have third parties manufacture and release the product in sufficient quantities;
- implement and maintain agreements with wholesalers and distributors;
- receive adequate levels of coverage and reimbursement for the product from governments and third-party payors;
- develop and execute marketing and sales strategies and programs for the product; and
- enter into suitable partnerships with third parties, as needed, to provide a viable platform to commercialize the product.

We expect that the revenues from inclisiran, if approved, will represent a very significant portion of our revenues in the future, particularly given that Angiomax is subject to generic competition. As a result, if we are unable to successfully commercialize inclisiran, our business, results of operations and financial condition would be materially harmed.

If we are unable to successfully develop our business infrastructure and operations, our ability to generate future product revenue will be adversely affected and our business, results of operations and financial condition may be adversely affected.

Our ability to support the sales and marketing of our products in the United States and globally will depend on our ability to properly scale our internal organization and infrastructure to accommodate the development and, upon approval, commercialization of inclisiran. To manage our existing and future growth and the breadth and complexity of our activities, we need to properly invest in personnel, infrastructure, information management systems and other operational resources. If we are unable to scale global operations successfully and in a timely manner, the growth of our business may be limited. Developing our business infrastructure and operations may be more difficult, more expensive or take longer than we anticipate.

Future development of our business infrastructure and operations could strain our operational, human and financial resources. In order to manage the development of our business infrastructure and global operations, we must:

- continue to improve operating, administrative, and information systems;
- accurately predict future personnel and resource needs to meet contract commitments;
- track the progress of ongoing projects; and
- attract and retain qualified management, sales, professional, scientific and technical operating personnel.

If we do not take these actions and are not able to manage our business, then our operations may be less successful than anticipated.

Risks Related to Our Financial Results

We will need additional funds to support our operations, and such funding may not be available to us on acceptable terms, or at all.

We are focused on the advancement of our product candidate, inclisiran. The completion of the development and the potential commercialization of inclisiran, should it receive regulatory approval, will require substantial funds. We will need to obtain substantial additional sources of funding to develop and, if approved, commercialize inclisiran.

Due to the introduction of generic competition against Angiomax and the divestiture of certain of our non-core products, our

revenues generated from product sales have declined significantly since 2014. Revenues are expected to continue to decline as generic competition for Angiomax increases. We have incurred net losses and negative cash flows from operations since 2014 and had an accumulated deficit of $1.2 billion as of March 31, 2018. We expect to incur significant expenses and operating losses for the foreseeable future as we continue to develop, seek regulatory approval for and commercially launch inclisiran. We believe our existing cash and cash equivalents and short-term investments of approximately $240.5 million as of March 31, 2018, together with a $25 million payment due from Melinta on January 5, 2019, and cash flows we expect to generate from product sales, will be sufficient to satisfy our anticipated operating and other funding requirements for the next twelve months from May 9, 2018 (the date of filing this Form 10-Q). If Melinta defaults on its cash payment obligations to us, we do not anticipate having sufficient cash, cash equivalents and short-term investments, together with expected cash flow from product sales, to satisfy our anticipated operating and other funding requirements for the next twelve months from May 9, 2018.

Because we expect to continue to incur negative cash flows from operations, we will need to raise additional funds through other sources of liquidity from the Melinta transaction and from asset sales, including asset sales of products or businesses that generate a material portion of our revenues, engage in other strategic transactions, sell additional equity or debt securities, or seek additional financing through other arrangements in order to meet our anticipated operating and funding requirements prior to the filing of an NDA for inclisiran. There can be no assurances that asset sales or public or private financings may be available in amounts or on terms acceptable to us, if at all. Our ability to obtain additional debt financing may be limited by market conditions. If we are unable to consummate asset sales, obtain additional financing or otherwise increase our cash resources, we may be required to delay, reduce the scope of, or eliminate one or more of our planned research, development or commercialization activities.

We have a history of net losses and may not achieve profitability in future periods.

We have incurred net losses in many years and on a cumulative basis since our inception, and we expect to continue to incur net losses. As of March 31, 2018, we had an accumulated deficit of approximately $1.2 billion. In those periods in which we were able to achieve profitability, our profitability was based on revenue from sales of Angiomax, and a substantial majority of our historic revenue has been generated from sales of Angiomax in the United States. However, generic competition for Angiomax commenced in the United States in July 2015 and we lost market exclusivity for Angiomax in Europe in August 2015. We expect that net revenue from sales of Angiomax will continue to decline in future years due to competition from generic versions of Angiomax, including our authorized generic being marketed by Sandoz and other generic versions of Angiomax which have been and may be approved by the FDA.

We expect to make substantial expenditures to further develop and commercialize inclisiran, including costs and expenses associated with research and development, clinical trials, nonclinical and preclinical studies, regulatory approvals and commercialization. We will need to generate significant revenue in future periods from inclisiran in order to achieve and maintain profitability. If we are unable to generate significant revenue, we may not achieve profitability in future periods. Our ability to generate future revenue will be substantially dependent on our ability to successfully commercialize inclisiran. If we fail to achieve profitability within the time frame expected by investors or securities analysts, the market price of our common stock may decline.

We review our inventory, including inventory purchase commitments, and provide reserves, as appropriate, against the carrying amount of inventory. As of March 31, 2018, our inventory of Angiomax was $4.8 million and there are no inventory-related purchase commitments for Angiomax bulk drug substance. If sales of Angiomax decline more than our current expectations, we could be required to make an additional allowance for excess or obsolete inventory, increase our accrual for product returns or increase our deferred tax valuation allowance, or we could incur other costs related to operating our business, each of which could negatively impact our results of operations and our financial condition.

We may need to raise additional capital. If we are unable to obtain such capital on favorable terms or at all, we may not be able to execute on our business plans and our business, financial condition and results of operations may be adversely affected.

On November 3, 2015, we announced that our current intention was to explore strategies for optimizing our capital structure and liquidity position. At March 31, 2018, we had approximately $216.0 million in cash and cash equivalents. We expect to devote substantial financial resources to our research and development efforts, clinical trials, nonclinical and preclinical studies and regulatory approvals and to our commercialization and manufacturing programs associated with our products and our products in development. We also will require cash to pay interest on the $400.0 million aggregate principal amount of the 2022 notes and the $402.5 million aggregate principal amount of the 2023 notes, and to make principal payments on the 2022 notes and 2023 notes at maturity or upon conversion (other than the 2023 notes upon conversion, in which case we will have the option to settle entirely in shares of our common stock). In addition, as part of our business development strategy, we generally structure our license agreements and acquisition agreements so that a significant portion of the total license or acquisition cost is contingent upon the

successful achievement of specified development, regulatory or commercial milestones. As a result, we will require cash to make payments upon achievement of these milestones under the license agreements and acquisition agreements to which we are a party.

As of May 8, 2018, we may have to make contingent cash payments upon the achievement of specified development, regulatory or commercial milestones of up to:

- $150.0 million for the license and collaboration agreement with Alnylam; and
- $68.7 million relating to our research and development infectious disease portfolio acquired in our Rempex acquisition (and which was not divested in the Melinta transaction).

As of May 8, 2018, our total potential milestone payment obligations related to development, regulatory and commercial milestones for our products and products in development under our license agreements and acquisition agreements, assuming all milestones are achieved in accordance with the terms of these agreements, would be approximately $218.7 million. Of this amount, approximately $48.7 million relates to development milestones, $70.0 million relates to regulatory approval milestones and $100.0 million relates to commercial milestones. These amounts do not include milestone payments of up to $175.8 million related to Ionsys, which was discontinued and withdrawn from the market in the United States in June 2017 and has also been discontinued in Europe, and the MDCO-700 development program, which we discontinued in August 2017.

Based on our anticipated timeline for the achievement of development, regulatory and commercial milestones, we expect that we would make $0.5 million of milestone payments under our license agreements and acquisition agreements during the remainder of 2018. We may pay additional milestone payments under our license agreements and acquisition agreements during 2018 if we achieve additional development, regulatory and commercial milestones during the year.

Total net revenues from sales of Angiomax were significantly lower in the year ended December 31, 2017, and the three months ended March 31, 2018 than in previous comparable periods, and we expect these revenues will decline further. These reduced revenues are likely to significantly impact our cash and cash equivalents and how we fund our future capital requirements.

We continually evaluate our liquidity requirements, capital needs and availability of resources in view of, among other things, alternative sources and uses of capital, debt service requirements, the cost of debt and equity capital and estimated future operating cash flow. We may raise additional capital; enter into licenses or collaborations with third parties to develop and commercialize inclisiran; sell assets, including asset sales of products or businesses that generate a material portion of our current revenue; restructure or refinance outstanding debt; repurchase material amounts of outstanding debt or equity; or take a combination of such steps or other steps to increase or manage our liquidity and capital resources. Any such actions or steps could have a material effect on us.

Our future capital requirements will depend on many factors, including:

- the progress, level, timing and cost of our research and development activities related to our clinical trials and non-clinical studies with respect to inclisiran;
- whether we develop and commercialize inclisiran on our own or through licenses and collaborations with third parties and the terms and timing of such arrangements, if any;
- the extent to which our submissions and planned submissions for regulatory approval of inclisiran are approved on a timely basis, if at all;
- the decline in Angiomax sales and the extent to which sales of the authorized generic of Angiomax are generated;
- if inclisiran receives regulatory approval, the extent to which it is commercially successful;
- the extent to which we are able to realize additional funds through our sources of liquidity from the Melinta transaction;
- the continuation or termination of third-party manufacturing, distribution and sales and marketing arrangements;
- the size, cost and effectiveness of our sales and marketing programs, including scaling our operations in anticipation of a potential launch of inclisiran;
- the amounts of our payment obligations to third parties with respect to inclisiran or other assets; and
- our ability to defend and enforce our intellectual property rights.

With respect to both our short-term and long-term cash requirements, if our existing cash resources, together with cash that we generate from sales of our products and other sources, are insufficient to satisfy our research and development, clinical trial, product commercialization and other funding requirements, including obligations under our convertible notes, we will need to sell additional equity or debt securities, engage in asset sales, including asset sales of products or businesses that generate a material portion of our revenue, engage in other strategic transactions, or seek additional financing through other arrangements, any of which could be material. Any sale of additional equity or convertible debt securities may result in dilution to our stockholders. Public or private financing may not be available in amounts or on terms acceptable to us, if at all. If we seek to raise funds through collaboration or licensing arrangements with third parties, we may be required to relinquish rights to products, products in development or technologies that we would not otherwise relinquish or grant licenses on terms that may not be favorable to us. Moreover, our ability to obtain additional debt financing may be limited by the 2022 notes and the 2023 notes, market conditions or otherwise. If we are unable to obtain additional financing or otherwise increase our cash resources, we may be required to delay, reduce the scope of, or eliminate one or more of our planned research, development and commercialization activities, which could adversely affect our business, financial condition and operating results.

If we seek to raise additional capital by selling equity or debt securities or through other arrangements in the future, our stockholders could be subject to dilution and we may become subject to financial restrictions and covenants, which may limit our activities.

If we determine that raising capital would be in the interest of the company and our stockholders, we may seek to sell equity or debt securities or seek financing through other arrangements. Any sale of equity or debt securities may result in dilution to our stockholders and increased liquidity requirements. Debt financing may involve covenants limiting or restricting our ability to take specific actions, such as incurring additional debt or making capital expenditures. Our ability to comply with these financial restrictions and covenants could be dependent on our future performance, which is subject to prevailing economic conditions and other factors, including factors that are beyond our control such as foreign exchange rates, interest rates and changes in the level of competition. Failure to comply with the financial restrictions and covenants would adversely affect our business, financial condition and operating results.

We may not realize the anticipated benefits of past or future acquisitions or product licenses and integration of these acquisitions and any products and product candidates acquired or licensed may disrupt our business and management.

We have in the past and may in the future acquire or license additional development-stage compounds, clinical-stage product candidates, approved products, technologies or businesses. For example, we entered into a license and collaboration agreement with Alnylam with respect to inclisiran. We may not realize the anticipated benefits of an acquisition, license, or collaboration, each of which involves numerous risks. These risks include:

- difficulty in integrating the operations, products or product candidates and personnel of an acquired company;
- entry into markets in which we have no or limited direct prior experience and where competitors in such markets have stronger market positions;
- failure to successfully further develop the acquired or licensed business, product, compounds, programs or technology or to achieve strategic objectives, including commercializing and marketing successfully the development stage compounds and clinical stage candidates that we acquire or license;
- disruption of our ongoing business and distraction of our management and employees from other opportunities and challenges;
- inadequate or unfavorable clinical trial results from acquired or contracted for products in development;
- inability to retain personnel, key customers, distributors, vendors and other business partners of the acquired company, or acquired or licensed product or technology;
- potential failure of the due diligence processes to identify significant problems, liabilities or other shortcomings or challenges of an acquired company, or acquired or licensed product or technology, including but not limited to, problems, liabilities or other shortcomings or challenges with respect to intellectual property, product quality, revenue recognition or other accounting practices, employee, customer or partner disputes or issues and other legal and financial contingencies and known and unknown liabilities;

- liability for activities of the acquired company or licensor before the acquisition or license, including intellectual property infringement claims, violations of laws, commercial disputes, tax liabilities, and other known and unknown liabilities;

- exposure to litigation or other claims in connection with, or inheritance of claims or litigation risk as a result of, an acquisition or license, including but not limited to, claims from terminated employees, customers, former stockholders or other third-parties; and

- difficulties in the integration of the acquired company's departments, systems, including accounting, human resource and other administrative systems, technologies, books and records, and procedures, as well as in maintaining uniform standards, controls, including internal control over financial reporting required by the Sarbanes-Oxley Act of 2002 and related procedures and policies.

Acquisitions and licensing arrangements are inherently risky, and ultimately, if we do not complete an announced acquisition or license transaction or integrate an acquired business, or an acquired or licensed product or technology successfully and in a timely manner, we may not realize the benefits of the acquisition or license to the extent anticipated and the perception of the effectiveness of our management team and our company may suffer in the marketplace. In addition, even if we are able to achieve the long-term benefits associated with our strategic transactions, our expenses and short-term costs may increase materially and adversely affect our liquidity and short-term profitability. Further, if we cannot successfully integrate an acquired business, or acquired or licensed products or technologies, we may experience material negative consequences to our business, financial condition or results of operations. Further, if we sell products that have been acquired through acquisitions or licensing arrangements, we may incur losses depending on the consideration received and structure of the transaction. For example, in connection with our sale of our hemostasis business, which we completed on February 1, 2016, we incurred impairment charges of $133.3 million, including $24.5 million related to goodwill. Future acquisitions or licenses could also result in dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities, or amortization expenses, or impairment of goodwill and intangible assets, and restructuring charges, any of which could harm our business, financial condition or results of operations.

Risks Related to Our Notes

We have incurred substantial indebtedness, and our leverage and maintenance of high levels of indebtedness may adversely affect our business, financial condition and results of operations. Servicing this debt, including the 2022 notes and the 2023 notes, will require a significant amount of cash, and we may not have sufficient cash flow from our business to pay the interest on or principal of the 2022 notes, the 2023 notes or other debt we may incur.

We have incurred a significant amount of indebtedness. Our maintenance of this level of indebtedness could have adverse consequences, including:

- requiring us to dedicate a substantial portion of cash flow from operations to the payment of interest on, and principal of, our debt, which will reduce the amounts available to fund working capital, capital expenditures, product development efforts and other general corporate purposes;

- increasing our vulnerability to general adverse economic, industry and market conditions;

- limiting our ability to obtain additional financing in the future or engage in certain strategic transactions without securing bondholder consent;

- limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we compete; and

- placing us at a possible competitive disadvantage to less leveraged competitors and competitors that have less debt, better debt servicing options or better access to capital resources.

In addition, our ability to make scheduled payments of the principal of, to pay interest on or to refinance the remaining amount outstanding under the 2022 notes or the 2023 notes depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations in the future sufficient to service our debt, including the notes. If we are unable to generate cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be unfavorable to us or highly dilutive, any of which may be material to the holders of our common stock. Our ability to refinance our indebtedness will depend

on the capital markets and our financial condition at the time we seek to refinance such indebtedness. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

We may not have the ability to raise the funds necessary to settle conversions of the 2022 notes or to repurchase the 2022 notes or the 2023 notes upon a fundamental change, and our future debt may contain limitations on our ability to pay cash upon conversion of the 2022 notes or repurchase of the 2022 notes or 2023 notes.

Holders of the 2022 notes and the 2023 notes will have the right to require us to repurchase their notes upon the occurrence of a fundamental change, as defined in the applicable indenture, at a repurchase price equal to 100% of their principal amount, plus accrued and unpaid interest, if any, as described in the applicable indenture. In addition, upon conversion of the 2022 notes, we will be required to make with respect to each $1,000 in principal amount of notes converted cash payments of at least the lesser of $1,000 and the sum of the daily conversion values as described in the applicable indenture. Upon conversion of the 2023 notes, we will have the option to settle such conversions in cash, shares of our common stock or a combination thereof. However, we may not have enough available cash or be able to obtain financing at the time we are required to repurchase notes, to pay the notes at maturity or to pay cash upon conversions of such notes. In addition, our ability to repurchase notes or to pay cash upon conversions of such notes may be limited by law, by regulatory authority or by agreements governing our existing indebtedness (including, in the case of the 2022 notes or the 2023 notes, the indenture governing any other series of notes) and future indebtedness. Our failure to repurchase notes at a time when the repurchase is required by the applicable indenture or to pay any cash payable on future conversions of the notes as required by the applicable indenture would constitute a default under the applicable indenture. A default under the applicable indenture governing the 2022 notes or the 2023 notes, respectively, or the fundamental change itself could also lead to a default under agreements governing our existing indebtedness (including, in the case of the 2022 notes or the 2023 notes, the indenture governing any other series of notes) and future indebtedness. If the repayment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the notes or make cash payments upon conversions thereof.

The conditional conversion feature of the 2022 notes or the 2023 notes, if triggered, may adversely affect our financial condition and operating results.

In the event the conditional conversion feature of the 2022 notes or the 2023 notes is triggered, holders of such notes will be entitled to convert the notes at any time during specified periods at their option, which are set forth in the applicable indenture. If one or more holders elect to convert their 2022 notes, we would be required, with respect to each $1,000 principal amount of 2022 notes, to make cash payments equal to the lesser of $1,000 and the sum of the daily conversion values, which could adversely affect our liquidity. If the holders of all of the 2022 notes were able to exercise their conversion option, we would not have sufficient cash to satisfy our payment obligations with respect to all of the 2022 notes and meet our anticipated funding requirements for a year from May 9, 2018. With respect to the 2023 notes, we have the option to settle conversions entirely in cash, in common stock or a combination thereof. In addition, even if holders do not elect to convert their notes, we are required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the notes as a current rather than long-term liability, which results in a material reduction of our net working capital.

The accounting method for convertible debt securities that may be settled in cash, such as the 2022 notes and the 2023 notes, could have a material effect on our reported financial results.

Under Accounting Standards Codification 470-20, “Debt with Conversion and Other Options”, which we refer to as ASC 470-20, an entity must separately account for the liability and equity components of the convertible debt instruments that may be settled entirely or partially in cash upon conversion (such as the 2022 notes and the 2023 notes) in a manner that reflects the issuer’s economic interest cost. The effect of ASC 470-20 on the accounting for the 2022 notes and the 2023 notes is that the equity component is required to be included in the additional paid in capital section of stockholders’ equity on our consolidated balance sheet, and the value of the equity component would be treated as original issue discount for purposes of accounting for the debt component of the 2022 notes and the 2023 notes. As a result, we will be required to record a greater amount of non-cash interest expense in current periods presented as a result of the amortization of the discounted carrying value of the notes to their face amount over the term of the 2022 notes and the 2023 notes. We will report lower net income in our financial results because ASC 470-20 will require interest to include both the current period’s amortization of the debt discount and the instrument’s coupon interest, which could adversely affect our reported or future financial results, the market price of our common stock and the trading price of the 2022 notes and the 2023 notes.

In addition, under certain circumstances, convertible debt instruments that may be settled entirely or partly in cash (such as the 2022 notes or the 2023 notes) are currently accounted for utilizing the treasury stock method, the effect of which is that the shares issuable upon conversion of the notes are not included in the calculation of diluted earnings per share except to the extent that the conversion value of the notes exceeds their principal amount. Under the treasury stock method, for diluted earnings per

share purposes, the transaction is accounted for as if the number of shares of common stock that would be necessary to settle such excess are issued. We cannot be sure that the accounting standards in the future will continue to permit the use of the treasury stock method. If we are unable to use the treasury stock method in accounting for the shares issuable upon conversion of the 2022 notes or the 2023 notes, then our diluted earnings per share would be adversely affected.

We may incur substantially more debt or take other actions which would intensify the risks discussed above.

We and our subsidiaries may be able to incur substantial additional debt in the future, some of which may be secured debt. We and our subsidiaries are not restricted under the terms of the applicable indenture governing the 2022 notes or the 2023 notes from incurring additional debt, securing existing or future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of the applicable indenture governing the 2022 notes or the 2023 notes that could have the effect of diminishing our ability to make payments on the notes when due.

Additional Risks Related to Commercialization

We face substantial competition, which may result in others discovering, developing or commercializing competing products before or more successfully than we do.

Our industry is highly competitive. Competitors in the United States and other countries include major pharmaceutical companies, specialty pharmaceutical companies and biotechnology firms, universities and other research institutions. Many of our competitors are substantially larger than we are and have substantially greater research and development capabilities and experience, and greater manufacturing, marketing and financial resources, than we do.

Our competitors may develop, market or license products or novel technologies that are more effective, safer, more convenient or less costly than any that have been or are being developed or sold by us, or may obtain marketing approval for their products from the FDA or equivalent foreign regulatory bodies more rapidly than we may obtain approval for ours.

There are well established products, including in many cases generic products, that are approved and marketed for the indications for which Angiomax is approved and the markets and indications for which we are developing inclisiran. In addition, competitors are developing products for such markets and indications. A description of the competition for inclisiran and Angiomax is included in “Part I, Item 1. *Business-Competition*” of our Annual Report on Form 10-K for the year ended December 31, 2017.

We expect to compete, in the case of inclisiran, and we compete, in the case of Angiomax, on the basis of product efficacy, safety, ease of administration, price and economic value compared to drugs used in current practice or currently being developed. If we are not successful in demonstrating these attributes, physicians and other key healthcare decision makers may choose other products over our products, switch from our products to new products or choose to use our products only in limited circumstances, which could adversely affect our business, financial condition and results of operations.

If reimbursement by government payers or other third-party payers is not available or limited for our products, pricing is delayed or set at unfavorable levels or access to our products is reduced or terminated by governmental and other third-party payers, our ability to generate revenue would be adversely affected.

Acceptable levels of coverage and reimbursement of drug treatments by government payers, such as Medicare and Medicaid programs, private health insurers and other organizations, have a significant effect on our ability to successfully commercialize our products. Reimbursement in the United States, Europe or elsewhere may not be available for any products we may develop or, if already available, may be decreased in the future. We may not get reimbursement or reimbursement may be limited if government payers, private health insurers and other organizations are influenced by the prices of existing drugs in determining whether our products will be reimbursed and at what levels. If reimbursement is not available or is available only at limited levels, we may not be able to commercialize our products, or may not be able to obtain a satisfactory financial return on our products.

In certain countries, particularly the countries of the European Union, the pricing of prescription pharmaceuticals and the level of reimbursement are subject to governmental control. In some countries, pricing and reimbursement are set with limited, if any, participation in the process by the marketing authorization holder. In addition, it can take an extended period of time after the receipt of initial approval of a product to establish and obtain reimbursement or pricing approval. Reimbursement approval also may be required at the individual patient level, which can lead to further delays. In addition, in some countries, it may take an extended period of time to collect payment even after reimbursement has been established. If prices are set at unsatisfactory levels, such prices may negatively impact our revenues from sales in those countries. An increasing number of countries are taking initiatives to attempt to reduce large budget deficits by focusing cost-cutting efforts on pharmaceuticals for their state-run health care systems. These international price control efforts have impacted all regions of the world, but have been most drastic in the

European Union. Further, a number of European Union countries use drug prices from other countries of the European Union as "reference prices" to help determine pricing in their own countries. Consequently, a downward trend in drug prices for some countries could contribute to similar occurrences elsewhere. If reimbursement of our future products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, we may be unable to achieve or sustain profitability.

Third-party payers, including Medicare and Medicaid, increasingly are challenging prices charged for and the cost-effectiveness of medical products and services and they increasingly are limiting both coverage and the level of reimbursement for drugs. If these third-party payers do not consider our products to be economically beneficial compared to other available therapies, they may not cover our products after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products at a profit. Third-party payers may provide coverage, but place stringent limitations on such coverage, such as requiring alternative treatments to be tried first. The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost-containment programs to limit the growth of government-paid health care costs, including price controls, restrictions on reimbursement and requirements for substitution of generic products for branded prescription drugs. There exists a broader trend in health care in which the government and other payors are seeking to move from individualized "fee for service" payments toward a system focused on "bundled" payments for more comprehensive packages of services and episodes of care. Also, the trend toward managed health care in the United States and the changes in health insurance programs may result in lower prices for pharmaceutical products and health care reform.

Health care reform measures such as those outlined above, and others consistent with these trends, could, among other things, increase pressure on pricing. Additionally, health care reform efforts undertaken during the Trump administration may result in additional reductions in Medicare, Medicaid and other healthcare funding. In addition to federal legislation, state legislatures and foreign governments have also shown significant interest in implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic products. The establishment of limitations on patient access to our drugs, adoption of price controls and cost-containment measures in new jurisdictions or programs, and adoption of more restrictive policies in jurisdictions with existing controls and measures could adversely impact our business and future results. If governmental organizations and third-party payers do not consider our products to be cost-effective compared to other available therapies, they may not reimburse providers or consumers of our products or, if they do, the level of reimbursement may not be sufficient to allow us to sell our products on a profitable basis.

Use or misuse of our products may result in serious injuries or even death to patients and may subject us to significant claims for product liability. If we are unable to obtain insurance at acceptable costs and adequate levels or otherwise protect ourselves against potential product liability claims, we could be exposed to significant liability.

Our business exposes us to potential significant product liability risks which are inherent in the testing, manufacturing, marketing and sale of human healthcare products. Product liability claims might be made by patients in clinical trials, consumers, health care providers or pharmaceutical companies or others that sell our products. These claims may be made even with respect to those products that are manufactured in licensed and regulated facilities or otherwise possess regulatory approval for commercial sale or study.

These claims could expose us to significant liabilities that could prevent or interfere with the development or commercialization of our products. Product liability claims could require us to spend significant time and money in litigation or pay significant damages. With respect to our commercial sales and our clinical trials, we are covered by product liability insurance in the amount of $10.0 million per occurrence and $10.0 million annually in the aggregate on a claims-made basis. This coverage may not be adequate to cover all or any product liability claims that we face.

As we continue to commercialize Angiomax and develop inclisiran, we may wish to increase our product liability insurance. Product liability coverage is expensive. In the future, we may not be able to maintain or obtain such product liability insurance on reasonable terms, at a reasonable cost or in sufficient amounts to protect us against losses due to product liability claims.

We may not be able to manage our business effectively if we are unable to attract and retain key personnel and consultants.

Our industry has experienced a high rate of turnover of management personnel in recent years. We are highly dependent on our ability to attract and retain qualified personnel for the acquisition, development and commercialization activities we conduct or sponsor. If we lose one or more of the members of our senior management, including our Chief Executive Officer, Clive A. Meanwell, or other key employees or consultants, our ability to implement successfully our business strategy could be seriously harmed. Our ability to replace these key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to acquire, develop and commercialize

products successfully. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate such additional personnel.

Risks Related to our Dependence on Third Parties for Manufacturing, Research and Development, and Distribution Activities

We do not have manufacturing or supply capabilities and are completely dependent on third parties for the manufacture and supply of our products. We depend on a limited number of suppliers for the production of bulk drug substance for inclisiran and Angiomax and to carry out fill-finish activities. If any of these suppliers does not or cannot fulfill its manufacturing or supply obligations to us, our ability to conduct clinical trials of inclisiran and to meet commercial demands for Angiomax could be impaired and our business could be harmed.

We do not manufacture inclisiran or Angiomax, and do not plan to develop any capacity to manufacture them. We currently rely on a limited number of manufacturers and other third parties for bulk substance and to carry out fill-finish activities for inclisiran and Angiomax. We expect to continue this manufacturing strategy for the foreseeable future.

In the event that any third-party is unable or unwilling to carry out its respective manufacturing or supply obligations or terminates or refuses to renew its arrangements with us, we may be unable to obtain alternative manufacturing or supply on commercially reasonable terms on a timely basis or at all. In such cases, the third-party manufacturers have made no commitment to supply the drug product to us on a long-term basis and could reject our purchase orders. Only a limited number of manufacturers are capable of manufacturing inclisiran and Angiomax. Consolidation within the pharmaceutical manufacturing industry could further reduce the number of manufacturers capable of producing our products, or otherwise affect our existing contractual relationships.

If we were required to transfer manufacturing processes to other third-party manufacturers and we were able to identify an alternative manufacturer, we would still need to satisfy various regulatory requirements. Satisfaction of these requirements could cause us to experience significant delays in receiving an adequate supply of inclisiran and Angiomax and could be costly. Moreover, we may not be able to transfer processes that are proprietary to the manufacturer. Any delays in the manufacturing process may adversely impact our ability to supply product for clinical trials of inclisiran, which could affect our ability to complete clinical trials of inclisiran on a timely basis and our ability to meet commercial demands for our products on a timely basis, which could reduce our revenue.

If third parties on whom we rely to manufacture and support the development and commercialization of inclisiran and Angiomax do not fulfill their obligations or we are unable to establish or maintain such arrangements, the development and commercialization of our products may be terminated or delayed, and the costs of development and commercialization may increase.

Our development and commercialization strategy involves entering into arrangements with corporate and academic collaborators, contract research organizations, distributors, third-party manufacturers, licensors, licensees and others to conduct development work, manage or conduct our clinical trials, manufacture our products and market and sell our products outside of the United States. We do not have the expertise or the resources to conduct many of these activities on our own and, as a result, are particularly dependent on third parties in many areas.

We may not be able to maintain our existing arrangements with respect to the commercialization or manufacture of Angiomax or establish and maintain arrangements to develop, manufacture and, if approved, commercialize inclisiran or any additional product candidates or products we may acquire on terms that are acceptable to us. Any current or future arrangements for development and commercialization may not be successful. If we are not able to establish or maintain agreements relating to Angiomax, inclisiran or any additional products or product candidates we may acquire, our results of operations would be materially adversely affected.

Third parties may not perform their obligations as expected. The amount and timing of resources that third parties devote to developing, manufacturing and commercializing our products are not within our control. Our collaborators may develop, manufacture or commercialize, either alone or with others, products and services that are similar to or competitive with the products that are the subject of the collaboration with us. Furthermore, our interests may differ from those of third parties that manufacture or commercialize our products. Our collaborators may reevaluate their priorities from time to time, including following mergers and consolidations, and change the focus of their development, manufacturing or commercialization efforts. Disagreements that may arise with these third parties could delay or lead to the termination of the development or commercialization of our product candidates, or result in litigation or arbitration, which would be time consuming and expensive.

If any third party that manufactures or supports the development or commercialization of our products breaches or terminates its agreement with us, fails to commit sufficient resources to our collaboration or conduct its activities in a timely manner, or fails to comply with regulatory requirements, such breach, termination or failure could:

- delay or otherwise adversely impact the manufacturing, development or commercialization of Angiomax, inclisiran or any additional products or product candidates that we may acquire or develop;
- require us to seek a new collaborator or undertake unforeseen additional responsibilities or devote unforeseen additional resources to the manufacturing, development or commercialization of our products; or
- result in the termination of the development or commercialization of our products.

Our reliance on third-party manufacturers and suppliers to supply Angiomax and inclisiran may increase the risk that we will not have appropriate supplies of each product or that sanctions may be imposed on us or the manufacturer due to a manufacturer's failure to comply with regulation requirements, either of which could adversely affect our business, results of operations and financial condition.

Reliance on third-party manufacturers and suppliers entails risks to which we would not be subject if we manufactured Angiomax or inclisiran ourselves, including:

- reliance on the third party for regulatory compliance and quality assurance;
- the possible breach of the manufacturing or supply agreement by the third party; and
- the possible termination or non-renewal of the agreement by the third party, based on its own business priorities, at a time that is costly or inconvenient for us.

Angiomax and inclisiran may compete with products of third parties for access to manufacturing facilities. If we are not able to obtain adequate supplies of our products, it will be more difficult for us to compete effectively, market and sell Angiomax and develop inclisiran.

Our manufacturers are subject to ongoing, periodic, unannounced inspection by the FDA and corresponding state and foreign agencies or their designees to evaluate compliance with the FDA's current good manufacturing practices, or cGMP, regulations and other governmental regulations and corresponding foreign standards. We cannot be certain that our present or future manufacturers will be able to comply with cGMP regulations and other FDA regulatory requirements or similar regulatory requirements outside the United States. We do not control compliance by our manufacturers with these regulations and standards. Failure of our third-party manufacturers or us to comply with applicable regulations could result in sanctions being imposed on the manufacturer or us, including fines and other monetary penalties, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval of our products in development, delays, suspension or withdrawal of approvals, suspension of clinical trials, license revocation, seizures or recalls of products in development or products, interruption of production, warning letters, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our Angiomax and inclisiran.

We may depend on collaborations with third parties for the development and commercialization of inclisiran. If those collaborations, if entered into, are not successful, we may not be able to capitalize on the market potential of inclisiran.

We may seek to develop and commercialize inclisiran through a variety of types of collaboration arrangements. Our likely collaborators for any marketing, distribution, development, licensing or broader collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. We may not be able to enter into these types of arrangements on a timely basis, on favorable terms or at all. Our ability to enter into such arrangements with respect to inclisiran that are subject to licenses may be limited by the terms of those licenses. If we do enter into any such arrangements with any third parties in the future, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of inclisiran. Our ability to generate revenues from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving inclisiran could pose a number of risks to us, including:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not pursue development and commercialization of inclisiran or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors such as an acquisition that diverts resources or creates competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon inclisiran, repeat or conduct new clinical trials or require a new formulation of inclisiran for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products in development if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- a collaborator with marketing and distribution rights to one or more products may not commit sufficient resources to the marketing and distribution of such product or products;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or otherwise expose us to potential litigation;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- disputes may arise with respect to the ownership of intellectual property developed pursuant to our collaborations;
- disputes may arise between the collaborators and us that result in the delay or termination of the research, development or commercialization of our products or products in development or that result in costly litigation or arbitration that diverts management attention and resources; and
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable products and products in development.

Collaboration agreements may not lead to development or commercialization of products in development in the most efficient manner or at all. If a collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program could be delayed, diminished or terminated.

If we use hazardous and biological materials in a manner that causes injury or violates applicable law, we may be liable for damages or subject to fines and penalties.

We conduct research and development activities that involve the controlled use of potentially hazardous substances, including chemical, biological and radioactive materials and viruses. In addition, our operations produce hazardous waste products. Federal, state and local laws and regulations in the United States and Canada govern the use, manufacture, storage, handling and disposal of hazardous materials. We may incur significant additional costs to comply with applicable laws in the future. Also, we cannot completely eliminate the risk of contamination or injury resulting from hazardous materials and we may incur liability as a result of any such contamination or injury. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources. We have only limited insurance for liabilities arising from hazardous materials. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental regulations may restrict our research, development and production efforts, which could harm our business, operating results and financial condition.

Additional Risks Related to Regulatory Matters

Clinical trials of product candidates are expensive and time-consuming, and the results of these trials are uncertain. If we are unable to conduct clinical trials that continue to demonstrate the safety and efficacy of inclisiran on a timely basis, then our costs of developing inclisiran may increase and we may not be able to obtain regulatory approval for inclisiran on a timely basis or at all.

Before we can obtain regulatory approvals to market inclisiran, we will be required to complete extensive clinical trials in humans to demonstrate the safety and efficacy of such product for such indication.

Clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. Success in pre-clinical testing or early clinical trials does not ensure that later clinical trials will be successful, and interim results of a clinical trial do not necessarily predict final results. An unexpected result in one or more of our clinical trials can occur at any stage of testing. For example, in November 2016, we voluntarily discontinued our clinical development program for MDCO-216, an investigational cholesterol efflux promoter, and in August 2017 we voluntarily discontinued our clinical development program for MDCO-700, an investigational anesthetic agent.

We may experience numerous unforeseen events during, or as a result of, the clinical trial process that could delay or prevent us from receiving regulatory approval or commercializing our inclisiran, including:

- our clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials which even if undertaken cannot ensure we will gain approval;
- data obtained from pre-clinical testing and clinical trials may be subject to varying interpretations, which could result in the FDA or other regulatory authorities deciding not to approve a product in a timely fashion, or at all;
- the cost of clinical trials may be greater than we currently anticipate;
- regulators, ethics committees or institutional review boards may not authorize us to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we, or the FDA or other regulatory authorities, might suspend or terminate a clinical trial at any time on various grounds, including a finding that participating patients are being exposed to unacceptable health risks. For example, we have in the past voluntarily suspended enrollment in one of our clinical trials to review an interim analysis of safety data from the trial; and
- the effects of inclisiran may not be the desired effects or may include undesirable side effects or inclisiran may have other unexpected characteristics.

The rate of completion of clinical trials depends in part upon the rate of enrollment of patients. Patient enrollment is a function of many factors, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, the existence of competing clinical trials and the availability of alternative or new treatments. Delays in patient enrollment in any of our current or future clinical trials may result in increased costs and program delays.

If we or the contract manufacturers manufacturing inclisiran and Angiomax fail to comply with the extensive regulatory requirements to which we, our contract manufacturers and inclisiran and Angiomax are subject, the development of inclisiran could be jeopardized and Angiomax could be subject to restrictions or withdrawal from the market, and we could be subject to penalties.

The research, testing, manufacturing, labeling, safety, advertising, promotion, storage, sales, distribution, import, export and marketing, among other things, of our products, both before and after approval, are subject to extensive regulation by governmental authorities in the United States, Europe and elsewhere throughout the world. Both before and after approval of a product, quality control and manufacturing procedures must conform to cGMP. Regulatory authorities, including the FDA, periodically inspect manufacturing facilities to assess compliance with cGMP. Our failure or the failure of contract manufacturers to comply with the laws administered by the FDA, the EMA or other governmental authorities could result in, among other things, any of the following:

- delay in approving or refusal to approve a product;
- product recall or seizure;

- suspension or withdrawal of an approved product from the market;
- delays in, suspension of or prohibition of commencing, clinical trials of inclisiran;
- interruption of production;
- operating restrictions;
- untitled or warning letters;
- injunctions;
- fines and other monetary penalties;
- the imposition of civil or criminal penalties;
- disruption of importing and exporting activities; and
- unanticipated expenditures.

We may incur significant liability if it is determined that we are promoting the "off-label" use of Angiomax, or, if approved, inclisiran.

Physicians may prescribe drug products for uses that are not described in the product's labeling and that differ from those approved by the FDA or other applicable regulatory agencies. Off-label uses are common across medical specialties. Although the FDA and other regulatory agencies do not regulate a physician's choice of treatments, the FDA and other regulatory agencies do restrict communications on the subject of off-label use. Companies may not promote drugs for off-label uses. The FDA and other regulatory and enforcement authorities actively enforce laws and regulations prohibiting promotion of off-label uses and the promotion of products for which marketing approval has not been obtained. A company that is found to have promoted off-label uses may be subject to significant liability, including civil and administrative remedies as well as criminal sanctions.

Notwithstanding the regulatory restrictions on off-label promotion, the FDA and other regulatory authorities allow companies to engage in truthful, non-misleading, and non-promotional scientific exchange concerning their products. We engage in medical education activities and communicate with investigators and potential investigators regarding our clinical trials. If the FDA or another regulatory or enforcement authority determines that our communications regarding our marketed products are not in compliance with the relevant regulatory requirements and that we have improperly promoted off-label uses, we may be subject to significant liability, including civil and administrative remedies as well as criminal sanctions.

If we do not comply with federal, state and foreign laws and regulations relating to the health care business, we could face substantial penalties.

We and our customers are subject to extensive regulation by the federal government, and the governments of the states and foreign countries in which we may conduct our business. In the United States, the laws that directly or indirectly affect our ability to operate our business include the following:

- the Federal Anti-Kickback Law, which prohibits persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce either the referral of an individual or furnishing or arranging for a good or service for which payment may be made under federal health care programs such as Medicare and Medicaid;
- other Medicare laws and regulations that prescribe the requirements for coverage and payment for services performed by our customers, including the amount of such payment;
- the Federal False Claims Act, which imposes civil and criminal liability on individuals and entities who submit, or cause to be submitted, false or fraudulent claims for payment to the government;

- the Federal False Statements Act, which prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with delivery of or payment for health care benefits, items or services; and

- various state laws that impose similar requirements and liability with respect to state healthcare reimbursement and other programs.

If our operations are found to be in violation of any of the laws and regulations described above or any other law or governmental regulation to which we or our customers are or will be subject, we may be subject to civil and criminal penalties, damages, fines, exclusion from the Medicare and Medicaid programs and the curtailment or restructuring of our operations. Similarly, if our customers are found to be non-compliant with applicable laws, they may be subject to sanctions, which could also have a negative impact on us. Any penalties, damages, fines, curtailment or restructuring of our operations would adversely affect our ability to operate our business and our financial results. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses, divert our management's attention from the operation of our business and damage our reputation.

Failure to comply with the U.S. Foreign Corrupt Practices Act, or FCPA, as well as the anti-bribery laws of the nations in which we conduct business, could subject us to penalties and other adverse consequences.

We are subject to the FCPA, which generally prohibits U.S. companies from engaging in bribery or other prohibited payments to foreign officials for the purpose of obtaining or retaining business and requires companies to maintain accurate books and records and internal controls, including at foreign-controlled subsidiaries. In addition, we are subject to other anti-bribery laws of the nations in which we conduct business that apply similar prohibitions as the FCPA. Our employees or other agents may engage in prohibited conduct without our knowledge under our policies and procedures and the FCPA and other anti-bribery laws that we may be subject to for which we may be held responsible. If our employees or other agents are found to have engaged in such practices, we could suffer severe penalties and other consequences that may have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Our Intellectual Property

If we breach any of the agreements under which we license rights to products or technology from others, we could lose license rights that are material to our business or be subject to claims by our licensors.

We license rights to products and technology that are important to our business, and we expect to enter into additional licenses in the future. For instance, we have exclusively licensed patents and patent applications from Alnylam covering RNAi therapeutics. Under our agreement with Alnylam, we are subject to a range of commercialization and development, sublicensing, royalty, patent prosecution and maintenance, insurance and other obligations.

Any failure by us to comply with any of these obligations or any other breach by us of our license agreements could give the licensor the right to terminate the license in whole, terminate the exclusive nature of the license or bring a claim against us for damages. Any such termination or claim could have a material adverse effect on our financial condition, results of operations, liquidity or business. Even if we contest any such termination or claim and are ultimately successful, such dispute could lead to delays in the development or commercialization of potential products and result in time-consuming and expensive litigation or arbitration. In addition, on termination we may be required to license to the licensor any related intellectual property that we developed.

If we are unable to obtain or maintain protection for the intellectual property relating to our products, the value of our products will be adversely affected.

The patent positions of pharmaceutical companies like us are generally uncertain and involve complex legal, scientific and factual issues. We cannot be certain that our patents and patent applications, including our own and those that we have rights to through licenses from third parties, will adequately protect our intellectual property and value of our products. Our success protecting our intellectual property depends significantly on our ability to:

- obtain and maintain U.S. and foreign patents, including defending those patents against adverse claims;

- secure patent term extension for the patents covering our approved products;

- protect trade secrets;
- operate without infringing the proprietary rights of others; and
- prevent others from infringing our proprietary rights.

We may not have any additional patents issued from any patent applications that we own or license. If additional patents are granted, the claims allowed may not be sufficiently broad to protect our technology. In addition, issued patents that we own or license may be challenged in contested proceedings such as opposition, derivation, reexamination, inter partes review, post-grant review or interference proceedings and may be narrowed, invalidated or circumvented, which could limit our ability to stop competitors from marketing similar products or limit the length of term of patent protection we may have for our products, and we may not be able to obtain patent term extension to prolong the terms of the principal patents covering our approved products. Changes in patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection.

In addition, the U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. This combination of events has created uncertainty with respect to the value of patents, once obtained, and with regard to our ability to obtain patents in the future. Depending on decisions by the U.S. Congress, the federal courts, and the PTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

Our patents also may not afford us protection against competitors with similar technology. Because patent applications in the United States and many foreign jurisdictions are typically not published until eighteen months after filing, or in some cases not at all, and because publications of discoveries in the scientific literature often lag behind actual discoveries, neither we nor our licensors can be certain that others have not filed or maintained patent applications for technology used by us or covered by our pending patent applications without our being aware of these applications.

We exclusively license patents and patent applications for inclisiran and we own patents and patent applications for Angiomax. The patents covering inclisiran and Angiomax are currently set to expire at various dates.

Inclisiran. We have exclusively licensed from Alnylam patents and patent applications covering RNAi therapeutics targeting PCSK9 for the treatment of hypercholesterolemia and other human diseases for purposes of developing and commercializing such RNAi therapeutics. Some of these patents are directed to general RNAi technology and expire between 2020 and 2028 in the United States. Other patents are directed to compositions of the inclisiran product being developed under our license from Alnylam and to methods of treatment using such inclisiran product and the patents expire in 2027 and 2028 in the United States. In addition, Alnylam has filed and is prosecuting a number of patent applications in the United States and in certain foreign countries. One of these applications, which, if issued, expires in December 2033, contains claims directed to specific compositions of the inclisiran product we are developing and methods of administrating such compositions.

With respect to the portfolio of patents licensed from Alnylam, it is possible that one or more companies hold patent rights that could be asserted against us or patent rights to which we may need a license. If a court rules that we need such patent rights that have been asserted against us and/or we are not able to obtain a license on reasonable terms, we may be forced to pay excessive license fees or may be unable to market inclisiran, which in either case could have a material adverse effect on our business. For example, in October 2017 Silence served a claim in the High Court of Justice, Chancery Division, Patents Court in the United Kingdom, naming The Medicines Company UK Ltd., our wholly owned subsidiary, Alnylam and Alnylam UK Limited, as co-defendants. In Silence's claim, it seeks a determination that it is entitled to supplementary protection certificates, or SPCs, based on its European Patent No. 2,258,847, or the '847 patent, and the prospective European regulatory approvals for inclisiran and for certain of Alnylam's product candidates. This is based on Silence's assertion that inclisiran and the cited Alnylam product candidates fall within the scope of the '847 patent. An SPC is an intellectual property right that could extend the life of the Silence patent in relation to a specified product for a period of up to five additional years bringing the expiration date up to 2028. In addition, Silence is seeking costs, interest and other unspecified relief. On October 31, 2017, we acknowledged service of the claim served by Silence and on November 30, 2017, submitted substantive defenses to the claim. On October 27, 2017, we and Alnylam filed and served a claim against Silence in the High Court seeking revocation of the '847 patent, as well as a declaration of non-infringement by inclisiran and certain of Alnylam's product candidates of the '847 patent, and costs and interest among other potential remedies. On November 14, 2017, Silence filed a defense to our claim along with counterclaims alleging infringement of the '847 patent by inclisiran and certain of Alnylam's product candidates. On December 11, 2017, we filed an answer and defense to the counter claims. The High Court has listed the trial for 10 days which is to be heard in a window starting on December 3, 2018 for all claims between Silence, Alnylam and us. In parallel to the above High Court proceedings, on December 14, 2017

we also commenced opposition proceedings at the EPO seeking revocation of the '847 patent. Alnylam and Sanofi have also each commenced opposition proceedings for the revocation of the '847 patent at the EPO. Although we believe the ‘847 patent is invalid and not infringed by inclisiran and we will vigorously defend any claim brought against us by Silence, litigation is subject to inherent uncertainty.

Angiomax. The principal U.S. patents covering Angiomax currently include the ‘727 patent and the ‘343 patent and previously included U.S. Patent No. 5,196,404, or the ‘404 patent. The ‘404 patent covered the composition of matter of Angiomax. The ‘404 patent was set to expire in March 2010, but the term was extended to December 15, 2014 by the PTO under the Hatch-Waxman Act. As a result of our study of Angiomax in the pediatric setting, we had an additional six-month period of pediatric exclusivity following expiration of the ‘404 patent. This period of exclusivity expired in June 2015.

In the second half of 2009, the PTO issued to us the ‘727 patent and the ‘343 patent, covering a more consistent and improved Angiomax drug product and the processes by which it is made. The ‘727 patent and the ‘343 patent are set to expire in January 2029, which includes pediatric exclusivity. In response to Paragraph IV Certification Notice letters we received with respect to ANDAs filed by a number of parties with the FDA seeking approval to market generic versions of Angiomax, we filed lawsuits against the ANDA filers alleging patent infringement of the ‘727 patent and ‘343 patent and have since entered into settlement agreements with respect to our suits against three ANDA filers, Teva, APP and Sun.

In our lawsuit against Hospira, on July 2, 2015, the Federal Circuit Court ruled against us, finding the ‘727 patent and ‘343 patent invalid under the Section 102(b) “on sale” bar. In November 2015, our petition for en banc review of the Federal Circuit Court's July 2, 2015 decision was granted and the Federal Circuit Court vacated its July 2, 2015 decision. In July 2015, as a result of the Federal Circuit Court's now vacated July 2, 2015 decision, we entered into a supply and distribution agreement with Sandoz under which we granted Sandoz the exclusive right to sell in the United States an authorized generic of Angiomax (bivalirudin). On July 15, 2015, Hospira's ANDAs for its generic versions of Angiomax were approved by the FDA and Hospira began selling its generic versions of Angiomax. On July 11, 2016, in an unanimous decision, the en banc Federal Circuit Court ruled in our favor by finding that the ‘727 patent and the ‘343 patent were not invalid under the “on sale” bar. The remaining issues on appeal that were not decided by the original panel were remanded back to the same panel for consideration. On February 6, 2018, the Federal Circuit Court issued a decision affirming the District Court’s finding of noninfringement of the ‘727 patent and ‘343 patent and remanding the case back to the District Court to determine whether there was an offer for sale of the invention under Section 102(b). Our patent infringement litigation with Mylan was ordered to be a companion appeal to the Hospira appeal and was heard by the same judges as the Hospira appeal. On April 6, 2017, the Federal Circuit Court found that Mylan’s ANDA for a generic bivalirudin product does not infringe either the ‘727 patent and ‘343 patent. On June 28, 2017, the district court entered an amended final judgment in favor of Mylan.

In addition to Hospira, other generic firms have entered the market. Mylan commenced marketing its generic bivalirudin product following a decision by the Federal Circuit Court in Mylan’s appeal that reversed an earlier district court decision that found that Mylan’s ANDA product infringed all of the asserted claims of the ‘727 patent. APP, through its affiliated company, Fresenius Kabi, commenced selling its generic version of Angiomax under provisions of a settlement agreement triggered by the Federal Circuit Court’s July 2, 2015 decision in the Hospira matter. Apotex Inc. and Dr. Reddy’s Laboratories have each also commenced commercialization of generic bivalirudin products upon receiving final approval if their respective ANDA filings by the FDA even though we remain in active litigation against Apotex and only recently settled with Dr. Reddy’s Laboratories.

A number of companies in addition to Hospira, Mylan, APP, Apotex Inc. and Dr. Reddy’s Laboratories have filed ANDAs for their generic versions of Angiomax. In addition to the generic versions and Baxter’s ready-to-use version of bivalirudin currently being sold, Angiomax could be subject to further generic competition in the United States from Teva and other generic ANDA filers that we have settled with, under the circumstances set forth in our respective settlement agreements with such parties and upon a final approval of each company's ANDA filings by the FDA. Pliva Hrvatska DOO, an affiliate of Teva, currently has tentative approval for its ANDA filing for its generic version of Angiomax. Other ANDA filers may commercialize their products ‘at risk’ if they receive final approval of their respective ANDA filings and are not subject to a Hatch-Waxman 30-month stay. Further, we remain in infringement litigation involving the ‘727 patent and ‘343 patent with the other ANDA filers. See Part II, Item 1. *Legal Proceedings* of this Quarterly Report on Form 10-Q for descriptions of our litigation with ANDA filers and related settlements. There can be no assurance as to the outcome of our infringement litigation. We may continue to incur further legal expenses related to these matters. Following our settlements with Teva, APP, Sun, Dr. Reddy’s, Aurobindo and Accord, we submitted the settlement documents for each settlement to the U.S. Federal Trade Commission, or the FTC, and the U.S. Department of Justice, or the DOJ. The FTC, the DOJ and state attorney general offices could seek to challenge our settlements with Teva, APP, Sun, Dr. Reddy’s, Aurobindo and Accord or a third party could initiate a private action under antitrust or other laws challenging our settlements with Teva, APP, Sun, Dr. Reddy’s, Aurobindo and Accord. While we believe our settlements are lawful, we may not prevail in any such challenges or litigation, in which case the other party might obtain injunctive relief, remedial relief, or such other relief as a court may order. In any event, we may incur significant costs in the event of an investigation or in defending any such action and our business and results of operations could be materially impacted if we fail to prevail against any such challenges.

In Europe, the principal patent covering Angiomax expired in August 2015. This patent covered the composition of matter of Angiomax. As a result, we face generic competition in Europe. We are in the process of voluntarily discontinuing and withdrawing Angiomax from the market outside of North America and have ceased related commercialization activities.

We plan to file applications for patent term extension for inclisiran upon its approval. If we do not receive patent term extensions for the periods requested by us or at all, our patent protection for inclisiran could be limited.

Among other proceedings, we are a party to a number of lawsuits that we brought against pharmaceutical companies that have notified us that they have filed ANDAs seeking approval to market generic versions of Angiomax. We cannot predict the outcome of these lawsuits and proceedings. Involvement in litigation and other proceedings, regardless of its outcome, is time-consuming and expensive and may divert our management's time and attention. During the period in which these matters are pending, the uncertainty of their outcome may cause our stock price to decline. An adverse result in these matters, whether appealable or not, may cause our stock price to decline.

In addition to seeking to enforce our patent rights, we have in the past and may in the future seek to enforce our other intellectual property rights, including, for example, our trademark rights in order to prevent third parties from using the same or confusingly similar trademarks. We may not be successful in enforcing such rights and preventing such use. Further, certain of our trademark rights are licensed to us by third parties and, in certain circumstances, on a non-exclusive basis, which does not afford us the right to prevent third parties from using such trademarks. Failure to adequately pursue and enforce our intellectual property rights could damage our brands, enable others to compete with our products and impair our competitive position.

If we are not able to keep our trade secrets confidential, our technology and information may be used by others to compete against us.

We rely significantly upon unpatented proprietary technology, information, processes and know-how. We seek to protect this information by confidentiality agreements and invention assignment agreements with our employees, consultants and other third-party contractors, as well as through other security measures. We may not have adequate remedies for any breach by a party to these confidentiality agreements or invention assignment agreements. In addition, our competitors may learn or independently develop our trade secrets. If our confidential information or trade secrets become publicly known, they may lose their value to us.

If we infringe or are alleged to infringe intellectual property rights of third parties, our business may be adversely affected.

Our research, development and commercialization activities, as well as any product candidates or products resulting from these activities, may infringe or be claimed to infringe patents or patent applications under which we do not hold licenses or other rights. Third parties may own or control these patents and patent applications in the United States and abroad. These third parties could bring claims against us or our collaborators that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages. Further, if a patent infringement suit were brought against us or our collaborators, we or they could be forced to stop or delay research, development, manufacturing or sales of the product or product candidate that is the subject of the suit.

As a result of patent infringement claims, or in order to avoid potential claims, we or our collaborators may choose or be required to seek a license from the third party and be required to pay license fees or royalties or both. These licenses may not be available on acceptable terms, or at all. Even if we or our collaborators were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we or our collaborators are unable to enter into licenses on acceptable terms. This could harm our business significantly.

There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical and biotechnology industries. In addition to infringement claims against us, we may become a party to other patent litigation and other proceedings, including reexamination, inter partes review, post-grant review, and interference proceedings declared by the PTO and opposition proceedings in the EPO, regarding intellectual property rights with respect to our products and technology. Patent litigation and other proceedings may also absorb significant management time. The cost to us of any patent litigation or other proceeding, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Patent litigation and other proceedings may also absorb significant management time.

Risks Related to Our Common Stock

Fluctuations in our operating results could affect the price of our common stock.

Our operating results may vary from period to period based on factors, including the timing, expenses and results of clinical trials, announcements regarding clinical trial results and product introductions by us or our competitors, the availability and timing of third-party reimbursement, sales and marketing expenses and the timing of regulatory approvals. If our operating results do not meet the expectations of investors and securities analysts as a result of these or other factors, the trading price of our common stock will likely decrease.

The capped call transactions may affect the value of the 2023 notes and our common stock.

In connection with the issuance of the 2023 notes, we entered into capped call transactions with respect to the 2023 notes with certain hedge counterparties. The capped call transactions will cover, subject to customary anti-dilution adjustments, the aggregate number of shares of common stock underlying the 2023 notes and are expected generally to reduce potential dilution to the common stock upon conversion of the 2023 notes in excess of the principal amount of such converted 2023 notes. In connection with establishing their initial hedges of the capped call transactions, the hedge counterparties (or their affiliates) entered into various derivative transactions with respect to the common stock concurrently with, and/or purchased the common stock shortly after, the pricing of the 2023 notes. The hedge counterparties (or their affiliates) are likely to modify their hedge positions by entering into or unwinding various derivative transactions with respect to the common stock and/or by purchasing or selling the common stock or other securities of ours in secondary market transactions prior to the maturity of the 2023 notes (and are likely to do so during the settlement averaging period under the capped call transactions, which precedes the maturity date of the 2023 notes, and on or around any earlier conversion date related to a conversion of the 2023 notes). The effect, if any, of any of these transactions and activities on the market price of our common stock or the 2023 notes will depend in part on market conditions and cannot be ascertained at this time, but any of these activities could adversely affect the value of our common stock, which could affect the value of the 2023 notes and the value of our common stock, if any, that the 2023 note holders receive upon any conversion of the 2023 notes.

Our stock price has been and may in the future be volatile. This volatility may make it difficult for you to sell common stock when you want or at attractive prices.

Our common stock has been and in the future may be subject to substantial price volatility. From January 1, 2015 to May 9, 2018, the last reported sale price of our common stock ranged from a high of $55.95 per share to a low of $24.32 per share. The value of your investment could decline due to the effect upon the market price of our common stock of any of the following factors, many of which are beyond our control:

- announcements of results of clinical trials or nonclinical studies by us or third parties relating to inclisiran or Angiomax or products of our competitors or of regulatory proceedings by us or our competitors;
- approval or rejection of submissions for marketing approval for inclisiran;
- changes in securities analysts' estimates of our financial performance;
- changes in valuations of similar companies;
- variations in our operating results;
- acquisitions and strategic partnerships;
- announcements of technological innovations or new commercial products by us or our competitors or the filing of ANDAs, NDAs or BLAs for products competitive with ours;
- changes in governmental regulations;
- developments in patent rights or other proprietary rights;
- the extent to which our products are commercially successful globally;

- developments in our ongoing litigation and significant new litigation;
- developments or issues with our contract manufacturers;
- changes in our management; and
- general market conditions.

We believe that period-to-period comparisons of our financial results will not necessarily be indicative of our future performance. If our revenues in any particular period do not meet expectations, we may not be able to adjust our expenditures in that period, which could cause our operating results to suffer. If our operating results in any future period fall below the expectations of securities analysts or investors, our stock price may fall by a significant amount.

The stock markets in general, and The NASDAQ Global Select Market and the market for biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations recently. These fluctuations often have been unrelated or disproportionate to the operating performance of these companies. These broad market and industry factors may adversely affect the market price of our common stock, regardless of our actual operating performance.

We have been subject to securities class action litigation and may be subject to similar or other litigation in the future, which may divert management's attention and have a material adverse effect on our business, financial condition and results of operations.

In February 2014, a class action lawsuit was filed against us and certain of our current and former officers alleging, among other things, that we and certain of our current and former officers violated federal securities laws because we and certain current and former officers allegedly made misrepresentations or did not make proper disclosures regarding the results of clinical trials which tested the efficacy and safety of one of our recently divested products. On February 12, 2016, the parties executed a stipulation for a proposed class settlement, subject to court approval, and on June 7, 2016, the Court granted final approval of the settlement.

There may be additional suits or proceedings brought in the future. Monitoring and defending against legal actions, whether or not meritorious, is time-consuming for our management and detracts from our ability to fully focus our internal resources on our business activities, and we cannot predict how long it may take to resolve these matters. In addition, we may incur substantial legal fees and costs in connection with litigation. Although we have insurance, coverage could be denied or prove to be insufficient.

Our corporate governance structure, including provisions in our certificate of incorporation and by-laws and Delaware law, may prevent a change in control or management that security holders may consider desirable.

The General Corporation Law of the State of Delaware and our certificate of incorporation and by-laws contain provisions that might enable our management to resist a takeover of our company or discourage a third party from attempting to take over our company. These provisions include:

- Section 203 of the Delaware General Corporation Law, which provides that we may not enter into a business combination with an interested stockholder for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in the manner prescribed in Section 203;
- our board of directors has the authority to issue, without a vote or action of stockholders, up to 5,000,000 shares of a new series of preferred stock and to fix the price, rights, preferences and privileges of those shares, each of which could be superior to the rights of holders of our common stock;
- our directors may be removed with or without cause but only by the affirmative vote of the holders of at least 75% of the votes which all stockholders would be entitled to cast in any annual election of directors;
- the size of our board of directors is determined by resolution of the board of directors;
- any vacancy on our board of directors, however occurring, including a vacancy resulting from an enlargement of our board, may only be filled by vote of a majority of our directors then in office, even if less than a quorum;
- only our board of directors may call special meetings of stockholders;

- our by-laws may be amended, altered or repealed by (i) the affirmative vote of a majority of our directors, subject to any limitations set forth in the by-laws, or (ii) the affirmative vote of the holders of at least 75% of the votes which all the stockholders would be entitled to cast in any annual election of directors;

- stockholders must provide us with advance notice, and certain information specified in our by-laws, in connection with nominations or proposals by such stockholder for consideration at an annual meeting;

- stockholders may not take any action by written consent in lieu of a meeting; and

- our certificate of incorporation may only be amended or repealed by the affirmative vote of a majority of our directors and the affirmative vote of the holders of at least 75% of the votes which all the stockholders would be entitled to cast in any annual election of directors (and plus any separate class vote that might in the future be required pursuant to the terms of any series of preferred stock that might be outstanding at the time any of these amendments are submitted to stockholders).

These provisions could have the effect of delaying, deferring, or preventing a change in control of us or a change in our management that stockholders may consider favorable or beneficial. These provisions could also discourage proxy contests and make it more difficult for stockholders to elect directors and take other corporate actions. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock or our other securities.

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

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

- responding to proxy contests and other actions by activist shareholders may be costly and time-consuming and may disrupt our operations and divert the attention of management and our employees;

- perceived uncertainties as to our future direction may result in our inability to consummate potential acquisitions, collaborations or in-licensing opportunities and may make it more difficult to attract and retain qualified personnel and business partners; and

- if individuals are elected to our board of directors with a specific agenda different from ours, it may adversely affect our ability to effectively and timely implement our strategic plan and create additional value for our stockholders.

Item 6. Exhibits

Exhibits

See the Exhibit Index on the page immediately preceding the exhibits for a list of exhibits filed as part of this Quarterly Report on Form 10-Q, which Exhibit Index is incorporated herein by this reference.

SIGNATURES

Pursuant to the requirements 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.

THE MEDICINES COMPANY

Date: May 9, 2018

By: /s/ Christopher J. Visioli
Christopher J. Visioli
Chief Financial Officer
(Principal Financial and Accounting Officer)

EXHIBIT INDEX

Exhibit Number	Description
31.1	Chief Executive Officer Certification pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Chief Financial Officer Certification pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Chief Executive Officer Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Chief Financial Officer Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	The following materials from The Medicines Company Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, formatted in XBRL (Extensible Business Reporting Language): (i) the Condensed Consolidated Balance Sheets, (ii) the Condensed Consolidated Statements of Operations, (iii) the Condensed Consolidated Statements of Comprehensive Loss, (iv) the Condensed Consolidated Statements of Cash Flows, and (v) Notes to Condensed Consolidated Financial Statements.

† Confidential treatment requested as to certain portions, which portions have been omitted and filed separately with the Securities and Exchange Commission.

CERTIFICATIONS

I, Clive A. Meanwell, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of The Medicines Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Clive A. Meanwell

Clive A. Meanwell

Chief Executive Officer

Dated: May 9, 2018

CERTIFICATIONS

I, Christopher J. Visioli, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of The Medicines Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Christopher J. Visioli

Christopher J. Visioli

Chief Financial Officer

Dated: May 9, 2018

EXHIBIT 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of The Medicines Company (the "Company") for the period ended March 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Clive A. Meanwell, Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Clive A. Meanwell
Clive A. Meanwell
Chief Executive Officer

Dated: May 9, 2018

A signed original of this written statement required by Section 906 has been provided to The Medicines Company and will be retained by The Medicines Company and furnished to the SEC or its staff upon request

EXHIBIT 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of The Medicines Company (the "Company") for the period ended March 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Christopher Visioli, Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Christopher Visioli
Christopher Visioli
Chief Financial Officer

Dated: May 9, 2018

A signed original of this written statement required by Section 906 has been provided to The Medicines Company and will be retained by The Medicines Company and furnished to the SEC or its staff upon request