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

FORM 10-Q

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

FOR THE QUARTERLY PERIOD ENDED MARCH 31, 2016

or

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

FOR THE TRANSITION PERIOD FROM _ TO _

Commission file number 000-19319

Vertex Pharmaceuticals Incorporated

(Exact name of registrant as specified in its charter)

Massachusetts	**04-3039129**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
50 Northern Avenue, Boston, Massachusetts	**02210**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code **(617) 341-6100**

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 x No o

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 x No o

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

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Common Stock, par value $0.01 per share	**247,349,864**
Class	Outstanding at April 20, 2016

VERTEX PHARMACEUTICALS INCORPORATED
FORM 10-Q
FOR THE QUARTER ENDED MARCH 31, 2016

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“We,” “us,” “Vertex” and the “Company” as used in this Quarterly Report on Form 10-Q refer to Vertex Pharmaceuticals Incorporated, a Massachusetts corporation, and its subsidiaries.

Part I. Financial Information

Item 1. Financial Statements

VERTEX PHARMACEUTICALS INCORPORATED
Condensed Consolidated Statements of Operations
(unaudited)
(in thousands, except per share amounts)

	Three Months Ended March 31,	
	2016	**2015**
Revenues:		
Product revenues, net	$ 394,410	$ 130,875
Royalty revenues	3,596	6,792
Collaborative revenues	74	842
Total revenues	398,080	138,509
Costs and expenses:		
Cost of product revenues	49,789	9,381
Royalty expenses	860	2,926
Research and development expenses	255,860	215,599
Sales, general and administrative expenses	105,214	85,860
Restructuring expenses (income), net	687	(3,272)
Total costs and expenses	412,410	310,494
Loss from operations	(14,330)	(171,985)
Interest expense, net	(20,698)	(21,307)
Other income (expenses), net	4,411	(5,113)
Loss from continuing operations before provision for income taxes	(30,617)	(198,405)
Provision for income taxes	5,485	299
Net loss	(36,102)	(198,704)
(Income) loss attributable to noncontrolling interest	(5,529)	98
Net loss attributable to Vertex	$ (41,631)	$ (198,606)
Amounts per share attributable to Vertex common shareholders:		
Net loss:		
Basic	$ (0.17)	$ (0.83)
Diluted	$ (0.17)	$ (0.83)
Shares used in per share calculations:		
Basic	243,831	239,493
Diluted	243,831	239,493

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

VERTEX PHARMACEUTICALS INCORPORATED
Condensed Consolidated Statements of Comprehensive Loss
(unaudited)
(in thousands)

	Three Months Ended March 31,	
	2016	**2015**
Net loss	$ (36,102)	$ (198,704)
Changes in other comprehensive loss:		
Unrealized holding gains on marketable securities	229	176
Unrealized (losses) gains on foreign currency forward contracts, net of tax	(5,212)	306
Foreign currency translation adjustment	(1,740)	(608)
Total changes in other comprehensive loss	(6,723)	(126)
Comprehensive loss	(42,825)	(198,830)
Comprehensive (income) loss attributable to noncontrolling interest	(5,529)	98
Comprehensive loss attributable to Vertex	$ (48,354)	$ (198,732)

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

VERTEX PHARMACEUTICALS INCORPORATED
Condensed Consolidated Balance Sheets
(unaudited)
(in thousands, except share and per share amounts)

	March 31, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	$ 604,245	$ 714,768
Marketable securities, available for sale	421,373	327,694
Restricted cash and cash equivalents (VIE)	76,273	78,910
Accounts receivable, net	181,878	177,639
Inventories	63,200	57,207
Prepaid expenses and other current assets	55,866	50,935
Total current assets	1,402,835	1,407,153
Property and equipment, net	690,521	697,715
Intangible assets	284,340	284,340
Goodwill	50,384	50,384
Cost method investment in CRISPR	30,138	—
Notes Receivable	—	30,000
Restricted cash	22,088	22,083
Other assets	7,600	6,912
Total assets	$ 2,487,906	$ 2,498,587
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	$ 75,221	$ 74,942
Accrued expenses	272,665	305,820
Deferred revenues, current portion	14,705	16,296
Accrued restructuring expenses, current portion	7,790	7,894
Capital lease obligations, current portion	17,292	15,545
Senior secured term loan, current portion	146,251	71,296
Other liabilities, current portion	18,117	14,374
Total current liabilities	552,041	506,167
Deferred revenues, excluding current portion	8,490	9,714
Accrued restructuring expenses, excluding current portion	6,145	7,464
Capital lease obligations, excluding current portion	38,886	42,923
Deferred tax liability	112,259	110,439
Construction financing lease obligation, excluding current portion	472,494	472,611
Senior secured term loan, net of current portion and discount	149,571	223,863
Other liabilities, excluding current portion	31,822	31,778
Total liabilities	1,371,708	1,404,959
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, $0.01 par value; 1,000,000 shares authorized; none issued and outstanding at March 31, 2016 and December 31, 2015	—	—
Common stock, $0.01 par value; 500,000,000 and 500,000,000 shares authorized at March 31, 2016 and December 31, 2015, respectively; 247,286,705 and 246,306,818 shares issued and outstanding at March 31, 2016 and December 31, 2015, respectively	2,429	2,427
Additional paid-in capital	6,262,964	6,197,500
Accumulated other comprehensive (loss) income	(4,899)	1,824
Accumulated deficit	(5,303,415)	(5,261,784)
Total Vertex shareholders' equity	957,079	939,967
Noncontrolling interest	159,119	153,661
Total shareholders' equity	1,116,198	1,093,628
Total liabilities and shareholders' equity	$ 2,487,906	$ 2,498,587

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

VERTEX PHARMACEUTICALS INCORPORATED
Condensed Consolidated Statements of Shareholders' Equity and Noncontrolling Interest
(unaudited)
(in thousands)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive (Loss) Income	Accumulated Deficit	Total Vertex Shareholders' Equity	Noncontrolling Interest	Total Shareholders' Equity
	Shares	Amount						
Balance at December 31, 2014	241,764	$ 2,385	$ 5,777,154	$ 917	$ (4,705,450)	$ 1,075,006	$ 21,177	$ 1,096,183
Other comprehensive loss, net of tax	—	—	—	(126)	—	(126)	—	(126)
Net loss	—	—	—	—	(198,606)	(198,606)	(98)	(198,704)
Issuance of common stock under benefit plans	1,816	14	41,902	—	—	41,916	—	41,916
Stock-based compensation expense	—	—	58,268	—	—	58,268	—	58,268
Balance at March 31, 2015	243,580	$ 2,399	$ 5,877,324	$ 791	$ (4,904,056)	$ 976,458	$ 21,079	$ 997,537
Balance at December 31, 2015	246,307	$ 2,427	$ 6,197,500	$ 1,824	$ (5,261,784)	$ 939,967	$ 153,661	$ 1,093,628
Other comprehensive loss, net of tax	—	—	—	(6,723)	—	(6,723)	—	(6,723)
Net loss	—	—	—	—	(41,631)	(41,631)	5,529	(36,102)
Issuance of common stock under benefit plans	980	2	9,147	—	—	9,149	—	9,149
Stock-based compensation expense	—	—	56,317	—	—	56,317	(71)	56,246
Balance at March 31, 2016	247,287	$ 2,429	$ 6,262,964	$ (4,899)	$ (5,303,415)	$ 957,079	$ 159,119	$ 1,116,198

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

VERTEX PHARMACEUTICALS INCORPORATED
Condensed Consolidated Statements of Cash Flows
(unaudited)
(in thousands)

	Three Months Ended March 31,	
	2016	**2015**
Cash flows from operating activities:		
Net loss	$ (36,102)	$ (198,704)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	55,472	57,384
Depreciation and amortization expense	16,415	16,363
Deferred income taxes	2,060	—
Other non-cash items, net	(3,835)	629
Changes in operating assets and liabilities:		
Accounts receivable, net	(2,512)	(5,863)
Inventories	(4,771)	(2,635)
Prepaid expenses and other assets	(7,325)	(15,233)
Accounts payable	(343)	(23,556)
Accrued expenses and other liabilities	(29,922)	(20,921)
Accrued restructuring expense	(1,459)	(24,367)
Deferred revenues	(2,815)	(5,333)
Net cash used in operating activities	(15,137)	(222,236)
Cash flows from investing activities:		
Purchases of marketable securities	(224,624)	(125,655)
Maturities of marketable securities	131,173	371,423
Expenditures for property and equipment	(11,974)	(10,558)
Increase in restricted cash and cash equivalents	(3)	(21,971)
Decrease in restricted cash and cash equivalents (VIE)	2,637	—
Decrease in other assets	83	799
Net cash (used in) provided by investing activities	(102,708)	214,038
Cash flows from financing activities:		
Issuances of common stock under benefit plans	8,846	41,616
Payments on capital lease obligations	(4,041)	(4,497)
Proceeds from capital lease financing	—	13,386
Payments on construction financing lease obligation	(103)	(91)
Net cash provided by financing activities	4,702	50,414
Effect of changes in exchange rates on cash	2,620	(2,596)
Net increase in cash and cash equivalents	(110,523)	39,620
Cash and cash equivalents—beginning of period	714,768	625,259
Cash and cash equivalents—end of period	$ 604,245	$ 664,879
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 20,603	$ 21,538
Cash paid for income taxes	$ 581	$ 60
Issuances of common stock exercises from employee benefit plans receivable	$ 593	$ 964

The Company has reclassified certain amounts in the period ending March 31, 2015 between operating, investing, and financing to correct improper classifications.

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

VERTEX PHARMACEUTICALS INCORPORATED
Notes to Condensed Consolidated Financial Statements
(unaudited)

A. Basis of Presentation and Accounting Policies

Basis of Presentation

The accompanying condensed consolidated financial statements are unaudited and have been prepared by Vertex Pharmaceuticals Incorporated ("Vertex" or the "Company") in accordance with accounting principles generally accepted in the United States of America ("GAAP").

The condensed consolidated financial statements reflect the operations of (i) the Company, (ii) its wholly-owned subsidiaries and (iii) consolidated variable interest entities (VIEs). All material intercompany balances and transactions have been eliminated. The Company operates in one segment, pharmaceuticals.

Certain information and footnote disclosures normally included in the Company's annual financial statements have been condensed or omitted. These interim financial statements, in the opinion of management, reflect all normal recurring adjustments necessary for a fair presentation of the financial position and results of operations for the interim periods ended March 31, 2016 and 2015.

The results of operations for the interim periods are not necessarily indicative of the results of operations to be expected for the full fiscal year. These interim financial statements should be read in conjunction with the audited financial statements for the year ended December 31, 2015, which are contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2015 that was filed with the Securities and Exchange Commission (the “SEC”) on February 16, 2016 (the "2015 Annual Report on Form 10-K").

Use of Estimates and Summary of Significant Accounting Policies

The preparation of condensed consolidated financial statements in accordance with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements, and the amounts of revenues and expenses during the reported periods. Significant estimates in these condensed consolidated financial statements have been made in connection with the calculation of revenues, inventories, research and development expenses, stock-based compensation expense, restructuring expense, the fair value of intangible assets, goodwill, contingent consideration, noncontrolling interest, the consolidation of VIEs, leases, the fair value of cash flow hedges and the provision for or benefit from income taxes. The Company bases its estimates on historical experience and various other assumptions, including in certain circumstances future projections that management believes to be reasonable under the circumstances. Actual results could differ from those estimates. Changes in estimates are reflected in reported results in the period in which they become known.

The Company's significant accounting policies are described in Note A, "Nature of Business and Accounting Policies," in the 2015 Annual Report on Form 10-K.

Recent Accounting Pronouncements

In 2016, the Financial Accounting Standards Board (“FASB”) issued amended guidance applicable to leases that will be effective for the year ending December 31, 2019. Early adoption is permitted. This update requires an entity to recognize assets and liabilities for leases with lease terms of more than 12 months on the balance sheet. The Company is in the process of evaluating the new guidance and determining the expected effect on its consolidated financial statements.

In 2016, the FASB issued amended guidance applicable to share-based compensation to employees that will be effective for the year ending December 31, 2017. Early adoption is permitted. This update simplifies the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. The Company is in the process of evaluating the new guidance and determining the expected effect on its consolidated financial statements.

For a discussion of other recent accounting pronouncements please refer to Note A, “Nature of Business and Accounting Policies—Recent Accounting Pronouncements,” in the 2015 Annual Report on Form 10-K. The Company did not adopt any

new accounting pronouncements during the three months ended March 31, 2016 that had a material effect on its condensed consolidated financial statements.

B. Product Revenues, Net

The Company sells its products principally to a limited number of specialty pharmacy providers and selected regional wholesalers in North America as well as government-owned and supported customers in international markets (collectively, its "Customers"). The Company's Customers in North America subsequently resell the products to patients and health care providers. The Company recognizes net revenues from product sales upon delivery to the Customer as long as (i) there is persuasive evidence that an arrangement exists between the Company and the Customer, (ii) collectibility is reasonably assured and (iii) the price is fixed or determinable.

In order to conclude that the price is fixed or determinable, the Company must be able to (i) calculate its gross product revenues from sales to Customers and (ii) reasonably estimate its net product revenues upon delivery to its Customers' locations. The Company calculates gross product revenues based on the price that the Company charges its Customers. The Company estimates its net product revenues by deducting from its gross product revenues (a) trade allowances, such as invoice discounts for prompt payment and Customer fees, (b) estimated government and private payor rebates, chargebacks and discounts, (c) estimated reserves for expected product returns and (d) estimated costs of co-pay assistance programs for patients, as well as other incentives for certain indirect customers.

The Company makes significant estimates and judgments that materially affect the Company's recognition of net product revenues. In certain instances, the Company may be unable to reasonably conclude that the price is fixed or determinable at the time of delivery, in which case it defers the recognition of revenues. Once the Company is able to determine that the price is fixed or determinable, it recognizes the revenues associated with the units in which revenue recognition was deferred.

The following table summarizes activity in each of the product revenue allowance and reserve categories for the three months ended March 31, 2016:

	Trade Allowances	Rebates, Chargebacks and Discounts	Product Returns	Other Incentives	Total
			(in thousands)		
Balance at December 31, 2015	$ 2,089	$ 44,669	$ 1,228	$ 1,310	$ 49,296
Provision related to current period sales	4,707	31,138	924	3,280	40,049
Adjustments related to prior period sales	(38)	(2,181)	(75)	—	(2,294)
Credits/payments made	(4,698)	(19,132)	(260)	(3,281)	(27,371)
Balance at March 31, 2016	$ 2,060	$ 54,494	$ 1,817	$ 1,309	$ 59,680

C. Collaborative Arrangements

Cystic Fibrosis Foundation Therapeutics Incorporated

In April 2011, the Company entered into an amendment (the "April 2011 Amendment") to its existing collaboration agreement with Cystic Fibrosis Foundation Therapeutics Incorporated ("CFFT") pursuant to which CFFT agreed to provide financial support for (i) development activities for VX-661, a compound that targets the processing and trafficking defect of the F508del CFTR proteins discovered under the collaboration, and (ii) additional research and development activities directed at discovering new compounds targeting the processing and trafficking defect of the F508del protein.

Under the April 2011 Amendment, CFFT agreed to provide the Company with up to $75.0 million in funding over approximately five years for corrector compound research and development activities. The Company retains the right to develop and commercialize KALYDECO (ivacaftor), ORKAMBI (lumacaftor in combination with ivacaftor), lumacaftor and VX-661. The Company recognized no collaborative revenues from this collaboration during the three months ended March 31, 2016 and 2015.

VERTEX PHARMACEUTICALS INCORPORATED
Notes to Condensed Consolidated Financial Statements
(unaudited)

In the original agreement, as amended prior to the April 2011 Amendment, the Company agreed to pay CFFT tiered royalties calculated as a percentage, ranging from single digits to sub-teens, of annual net sales of any approved drugs first synthesized or tested during the research term that ended in 2008, including ivacaftor, lumacaftor and VX-661. The April 2011 Amendment provides for a tiered royalty in the same range on net sales of corrector compounds first synthesized or tested during the research term that ended in February 2014. In each of 2012 and 2013, CFFT earned a commercial milestone payment of $9.3 million from the Company upon achievement of certain sales levels for KALYDECO. In each of the fourth quarter of 2015 and first quarter of 2016, CFFT earned a commercial milestone payment of $13.9 million from the Company upon achievement of certain sales levels of lumacaftor. There are no additional commercial milestone payments payable by the Company to CFFT related to sales levels for KALYDECO or ORKAMBI.

The Company began marketing KALYDECO in the United States and certain countries in the European Union in 2012 and began marketing ORKAMBI in the United States in 2015. The Company received approval for ORKAMBI in the European Union in 2015 and in Canada and Australia in 2016. The Company has royalty obligations to CFFT for ivacaftor, lumacaftor and VX-661 until the expiration of patents covering that compound. The Company has patents in the United States and European Union covering the composition-of-matter of ivacaftor that expire in 2027 and 2025, respectively, subject to potential patent extensions. The Company has patents in the United States and European Union covering the composition-of-matter of lumacaftor that expire in 2030 and 2026, respectively, subject to potential extension. The Company has patents in the United States and European Union covering the composition-of-matter of VX-661 that expire in 2027 and 2028, respectively, subject to potential extension.

CRISPR Therapeutics AG

On October 26, 2015, the Company entered into a strategic collaboration, option and license agreement (the "CRISPR Agreement") with CRISPR Therapeutics AG and its affiliates ("CRISPR") to collaborate on the discovery and development of potential new treatments aimed at the underlying genetic causes of human diseases using CRISPR-Cas9 gene editing technology. The Company has the exclusive right to license up to six CRISPR-Cas9-based targets. In connection with the CRISPR Agreement, the Company made an upfront payment to CRISPR of $75.0 million and a $30.0 million investment in CRISPR pursuant to a convertible loan agreement that converted into preferred stock in January 2016. The Company expensed $75.0 million to research and development, and the $30.0 million investment was recorded at cost and is classified as a long-term asset on the Company’s condensed consolidated balance sheet.

The Company will fund all of the discovery activities conducted pursuant to the CRISPR Agreement. For potential hemoglobinapathy treatments, including treatments for sickle cell disease, the Company and CRISPR will share equally all research and development costs and worldwide revenues. For other targets that the Company elects to license, the Company would lead all development and global commercialization activities. For each of up to six targets that the Company elects to license, other than hemoglobinapathy targets, CRISPR has the potential to receive up to $420.0 million in development, regulatory and commercial milestones and royalties on net product sales.

The Company may terminate the CRISPR Agreement upon 90 days’ notice to CRISPR prior to any product receiving marketing approval or upon 270 days’ notice after a product has received marketing approval. The CRISPR Agreement also may be terminated by either party for a material breach by the other, subject to notice and cure provisions. Unless earlier terminated, the CRISPR Agreement will continue in effect until the expiration of the Company's payment obligations under the CRISPR Agreement.

Janssen Pharmaceutica NV

The Company has a collaboration agreement (the “Janssen HCV Agreement”) with Janssen Pharmaceutica NV (“Janssen NV”) for the development, manufacture and commercialization of telaprevir, which Janssen NV began marketing under the brand name INCIVO in certain of its territories in September 2011. Pursuant to the Janssen HCV Agreement, as amended, Janssen NV has a fully-paid license to manufacture and commercialize INCIVO in its territories including Europe, South America, the Middle East, Africa and Australia, subject to the payment of third-party royalties on net sales of INCIVO. In addition to the collaborative revenues, the Company recorded royalty revenues and corresponding royalty expenses related to third-party royalties that Janssen NV remains responsible for based on INCIVO net sales.

VERTEX PHARMACEUTICALS INCORPORATED
Notes to Condensed Consolidated Financial Statements
(unaudited)

During the three months ended March 31, 2016 and 2015, the Company recognized the following revenues attributable to the Janssen NV collaboration:

	Three Months Ended March 31,	
	2016	2015
	(in thousands)	
Royalty revenues (INCIVO)	$ 78	$ 1,525
Collaborative revenues (telaprevir)	—	642
Total revenues attributable to the Janssen NV collaboration	$ 78	$ 2,167

Variable Interest Entities

The Company has entered into several agreements pursuant to which it has licensed rights to certain drug candidates from third-party collaborators, which has resulted in the consolidation of the third parties' financial statements into the Company's condensed consolidated financial statements as VIEs. In order to account for the fair value of the contingent milestone and royalty payments related to these collaborations under GAAP, the Company uses present-value models based on assumptions regarding the probability of achieving the relevant milestones, estimates regarding the time to develop the drug candidates, estimates of future product sales and the appropriate discount rates. The Company bases its estimate of the probability of achieving the relevant milestones on industry data for similar assets and its own experience. The discount rates used in the valuation model represent a measure of credit risk and market risk associated with settling the liabilities. Significant judgment is used in determining the appropriateness of these assumptions at each reporting period. Changes in these assumptions could have a material effect on the fair value of the contingent milestone and royalty payments. The following collaborations are reflected in the Company's financial statements as consolidated VIEs:

Parion Sciences, Inc.

License and Collaboration Agreement

On June 4, 2015, the Company entered into a strategic collaboration and license agreement (the "Parion Agreement") with Parion Sciences, Inc. (“Parion”). Pursuant to the agreement, the Company is collaborating with Parion to develop investigational epithelial sodium channel (“ENaC”) inhibitors, including VX-371 (formerly P-1037) and VX-551 (formerly P-1055), for the potential treatment of cystic fibrosis, or CF, and other pulmonary diseases. The Company is leading development activities for VX-371 and VX-551 and is responsible for all costs, subject to certain exceptions, related to development and commercialization of the compounds.

Pursuant to the Parion Agreement, the Company has worldwide development and commercial rights to Parion’s lead investigational ENaC inhibitors, VX-371 and VX-551, for the potential treatment of CF and all other pulmonary diseases and has the option to select additional compounds discovered in Parion’s research program. Parion received an $80.0 million up-front payment and has the potential to receive up to an additional (i) $490.0 million in development and regulatory milestone payments for development of ENaC inhibitors in CF, including $360.0 million related to global filing and approval milestones, (ii) $370.0 million in development and regulatory milestones for VX-371 and VX-551 in non-CF pulmonary indications and (iii) $230.0 million in development and regulatory milestones should the Company elect to develop an additional ENaC inhibitor from Parion’s research program. The Company has agreed to pay Parion tiered royalties that range from the low double digits to mid-teens as a percentage of potential sales of licensed products.

The Company may terminate the Parion Agreement upon 90 days’ notice to Parion prior to any licensed product receiving marketing approval or upon 180 days’ notice after a licensed product has received marketing approval. If the Company experiences a change of control prior to the initiation of the first Phase 3 clinical trial for a licensed product, Parion may terminate the Parion Agreement upon 30 days’ notice, subject to the Company's right to receive specified royalties on any subsequent commercialization of licensed products. The Parion Agreement also may be terminated by either party for a

material breach by the other, subject to notice and cure provisions. Unless earlier terminated, the Parion Agreement will continue in effect until the expiration of the Company's royalty obligations, which expire on a country-by-country basis on the later of (i) the date the last-to-expire patent covering a licensed product expires or (ii) ten years after the first commercial sale in the country.

The Company determined that Parion is a VIE based on, among other factors, the significance to Parion of the ENaC inhibitors licensed to the Company pursuant to the Parion Agreement and on the Company's power to direct the activities that most significantly affect the economic performance of Parion. Accordingly, the Company consolidated Parion's financial statements beginning on June 4, 2015. However, the Company's interests in Parion are limited to those accorded to the Company in the Parion Agreement. In particular, the Company did not acquire any equity interest in Parion, any interest in Parion's cash and cash equivalents or any control over Parion's activities that do not relate to the Parion Agreement.

Consideration for the Parion Agreement

The Company determined that the fair value of the consideration from the Company to Parion was $255.3 million as of June 4, 2015, which consisted of (i) an $80.0 million up-front payment, (ii) the estimated fair value of the contingent research and development milestones potentially payable by the Company to Parion and (iii) the estimated fair value of potential royalty payments payable by the Company to Parion. The Company valued the contingent milestone and royalty payments using (a) discount rates ranging from 4.1% to 5.9% for the development milestones and (b) a discount rate of 6.6% for royalties. The consideration paid and the fair value of the contingent milestone and royalty payments payable by the Company pursuant to the Parion Agreement are set forth in the table below:

	June 4, 2015
	(in thousands)
Up-front payment	$ 80,000
Fair value of contingent milestone and royalty payments	175,340
Total	$ 255,340

Allocation of Assets and Liabilities

For the purposes of the condensed consolidated balance sheets at June 4, 2015 and March 31, 2016, the Company allocated the total consideration, which is comprised of the up-front payment and the fair value of the contingent milestone and royalty payments, intangible assets, goodwill, deferred tax liability, net and net other assets and liabilities.

The Company recorded $255.3 million of intangible assets on the Company's condensed consolidated balance sheet for Parion's in-process research and development assets. These in-process research and development assets relate to Parion's pulmonary ENaC platform, including the intellectual property related to VX-371 and VX-551, that are licensed by Parion to the Company. The difference between the fair value of the consideration and the fair value of Parion's assets (including the fair value of intangible assets) and liabilities was allocated to goodwill.

The following table summarizes the fair values of the assets and liabilities recorded on the effective date of the Parion Agreement:

	June 4, 2015
	(in thousands)
Intangible assets	$ 255,340
Goodwill	10,468
Deferred tax liability	(91,023)
Net other assets (liabilities)	(10,468)
Net assets attributable to noncontrolling interests	$ 164,317

BioAxone Biosciences, Inc.

In October 2014, the Company entered into a license and collaboration agreement (the "BioAxone Agreement") with BioAxone Biosciences, Inc. ("BioAxone"), a privately-held biotechnology company, which resulted in the consolidation of BioAxone as a VIE beginning on October 1, 2014. The Company paid BioAxone initial payments of $10.0 million in the fourth quarter of 2014.

BioAxone has the potential to receive up to $90.0 million in milestones and fees, including development, regulatory and milestone payments and a license continuation fee. In addition, BioAxone would receive royalties and commercial milestones on future net product sales of VX-210, if any. The Company recorded an in-process research and development intangible asset of $29.0 million for VX-210 and a corresponding deferred tax liability of $11.3 million attributable to BioAxone. The Company holds an option to purchase BioAxone at a predetermined price. The option expires on the earliest of (a) the day the FDA accepts the Biologics License Application submission for VX-210, (b) the day the Company elects to continue the license instead of exercising the option to purchase BioAxone and (c) March 15, 2018, subject to the Company's option to extend this date by one year.

Aggregate VIE Financial Information

An aggregate summary of net loss attributable to noncontrolling interest related to the Company's VIEs for the three months ended March 31, 2016 and 2015 is as follows:

	Three Months Ended March 31,	
	2016	2015
	(in thousands)	
Loss attributable to noncontrolling interest before provision for income taxes	$ 839	$ 287
Provision for (benefit from) income taxes	3,062	(64)
Increase in fair value of contingent milestone and royalty payments	(9,430)	(125)
Net (income) loss attributable to noncontrolling interest	$ (5,529)	$ 98

During the three months ended March 31, 2016 and 2015, the fair value of the contingent milestone and royalty payments related to the BioAxone Agreement increased by $0.4 million and $0.1 million, respectively. During the three months ended March 31, 2016 the fair value of the contingent milestone and royalty payments related to the Parion Agreement increased by $9.0 million. The changes in the fair value of the contingent milestone and royalty payments were primarily due to the changes in market interest rates and the time value of money. As of March 31, 2016, the fair value of the contingent milestone and royalty payments related to the BioAxone Agreement and the Parion Agreement was $28.4 million and $188.0 million, respectively. As of December 31, 2015, the fair value of the contingent milestone and royalty payments related to the BioAxone collaboration and the Parion collaboration was $28.0 million and $179.0 million, respectively.

The following table summarizes items related to the Company's VIEs included in the Company's condensed consolidated balance sheets as of the dates set forth in the table:

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	March 31, 2016	December 31, 2015
	(in thousands)	
Restricted cash and cash equivalents (VIE)	$ 76,273	$ 78,910
Prepaid expenses and other current assets	2,818	3,138
Intangible assets	284,340	284,340
Goodwill	19,391	19,391
Other assets	434	455
Accounts payable	1,569	676
Taxes payable	24,512	24,554
Other current liabilities	6,595	7,100
Deferred tax liability, net	112,259	110,438
Other liabilities	310	300
Noncontrolling interest	159,119	153,661

The Company has recorded the VIEs' cash and cash equivalents as restricted cash and cash equivalents (VIE) because (i) the Company does not have any interest in or control over the VIEs' cash and cash equivalents and (ii) the Company's agreements with each VIE do not provide for the VIEs' cash and cash equivalents to be used for the development of the assets that the Company licensed from the applicable VIE. Assets recorded as a result of consolidating the Company's VIEs' financial condition into the Company's balance sheet do not represent additional assets that could be used to satisfy claims against the Company's general assets.

Outlicense Arrangements

In the ordinary course of the Company's business, the Company has entered into various agreements pursuant to which it has outlicensed rights to certain drug candidates to third-party collaborators. Although the Company does not consider any of these outlicense arrangements to be material, the most notable of these outlicense arrangements is described below. Pursuant to these outlicense arrangements, our collaborators are responsible for all costs related to the continued development of such drug candidates. Depending on the terms of the arrangements, the Company's collaborators may be required to make upfront payments, milestone payments upon the achievement of certain product research and development objectives and/or pay royalties on future sales, if any, of commercial products resulting from the collaboration.

Janssen Pharmaceuticals, Inc.

In June 2014, the Company entered into an agreement (the “Janssen Influenza Agreement”) with Janssen Pharmaceuticals, Inc. (“Janssen Inc.”), which was amended in October 2014 to clarify certain roles and responsibilities of the parties.

Pursuant to the Janssen Influenza Agreement, Janssen Inc. has an exclusive worldwide license to develop and commercialize certain drug candidates for the treatment of influenza, including VX-787. The Company received non-refundable payments of $35.0 million from Janssen Inc. in 2014, which were recorded as collaborative revenue. The Company has the potential to receive development, regulatory and commercial milestone payments as well as royalties on future product sales, if any.

Janssen Inc. is responsible for costs related to the development and commercialization of the compounds. During the three months ended March 31, 2016 and 2015, the Company recorded reimbursement for these development activities of $3.5 million and $7.6 million, respectively. The reimbursements are recorded as a reduction to development expense in the Company's condensed consolidated statements of operations primarily due to the fact that Janssen Inc. directs the activities and selects the suppliers associated with these activities. Janssen Inc. may terminate the Janssen Influenza Agreement, subject to certain exceptions, upon six months' notice.

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D. Earnings Per Share

Basic net loss per share attributable to Vertex common shareholders is based upon the weighted-average number of common shares outstanding during the period, excluding restricted stock and restricted stock units that have been issued but are not yet vested. Diluted net loss per share attributable to Vertex common shareholders is based upon the weighted-average number of common shares outstanding during the period plus additional weighted-average common equivalent shares outstanding during the period when the effect is dilutive.

The Company did not include the securities in the following table in the computation of the net loss per share attributable to Vertex common shareholders calculations because the effect would have been anti-dilutive during each period:

	Three Months Ended March 31,	
	2016	2015
Stock options	12,619	12,682
Unvested restricted stock and restricted stock units	3,565	3,474

E. Fair Value Measurements

The fair value of the Company's financial assets and liabilities reflects the Company's estimate of amounts that it would have received in connection with the sale of the assets or paid in connection with the transfer of the liabilities in an orderly transaction between market participants at the measurement date. In connection with measuring the fair value of its assets and liabilities, the Company seeks to maximize the use of observable inputs (market data obtained from sources independent from the Company) and to minimize the use of unobservable inputs (the Company's assumptions about how market participants would price assets and liabilities). The following fair value hierarchy is used to classify assets and liabilities based on the observable inputs and unobservable inputs used in order to value the assets and liabilities:

Level 1:	Quoted prices in active markets for identical assets or liabilities. An active market for an asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis.
Level 2:	Observable inputs other than Level 1 inputs. Examples of Level 2 inputs include quoted prices in active markets for similar assets or liabilities and quoted prices for identical assets or liabilities in markets that are not active.
Level 3:	Unobservable inputs based on the Company's assessment of the assumptions that market participants would use in pricing the asset or liability.

The Company's investment strategy is focused on capital preservation. The Company invests in instruments that meet the credit quality standards outlined in the Company's investment policy. This policy also limits the amount of credit exposure to any one issue or type of instrument. As of March 31, 2016, the Company's investments were in money market funds, short-term government-sponsored enterprise securities, U.S. Treasury securities, corporate debt securities and commercial paper.

As of March 31, 2016, all of the Company's financial assets that were subject to fair value measurements were valued using observable inputs. The Company's financial assets valued based on Level 1 inputs consisted of money market funds, short-term government-sponsored enterprise securities and U.S. Treasury securities. The Company's financial assets valued based on Level 2 inputs consisted of corporate debt securities and commercial paper, which consisted of investments in highly-rated investment-grade corporations.

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The following table sets forth the Company's financial assets (excluding VIE cash and cash equivalents) and liabilities subject to fair value measurements:

	Fair Value Measurements as of March 31, 2016			
		Fair Value Hierarchy		
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Financial assets carried at fair value:				
Cash equivalents:				
Money market funds	$ 190,601	$ 190,601	$ —	$ —
Corporate debt securities	13,557	—	13,557	—
Marketable securities:				
U.S. Treasury securities	33,104	33,104	—	—
Government-sponsored enterprise securities	126,478	126,478	—	—
Corporate debt securities	120,229	—	120,229	—
Commercial paper	141,562	—	141,562	—
Prepaid and other current assets:				
Foreign currency forward contracts	3,654	—	3,654	—
Other assets:				
Foreign currency forward contracts	182	—	182	—
Total financial assets	$ 629,367	$ 350,183	$ 279,184	$ —
Financial liabilities carried at fair value:				
Other liabilities, current portion:				
Foreign currency forward contracts	$ (3,765)	$ —	$ (3,765)	$ —
Other liabilities, excluding current portion:				
Foreign currency forward contracts	(657)	—	(657)	—
Total financial liabilities	$ (4,422)	$ —	$ (4,422)	$ —

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	Fair Value Measurements as of December 31, 2015			
		Fair Value Hierarchy		
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Financial instruments carried at fair value (asset position):				
Cash equivalents:				
Money market funds	$ 199,507	$ 199,507	$ —	$ —
Government-sponsored enterprise securities	85,994	85,994	—	—
Commercial paper	34,889	—	34,889	—
Corporate debt securities	11,533	—	11,533	—
Marketable securities:				
Government-sponsored enterprise securities	87,162	87,162	—	—
Commercial paper	141,409	—	141,409	—
Corporate debt securities	99,123	—	99,123	—
Prepaid and other current assets:				
Foreign currency forward contracts	5,161	—	5,161	—
Other assets:				
Foreign currency forward contracts	605	$ —	605	$ —
Total financial assets	$ 665,383	$ 372,663	$ 292,720	$ —
Financial instruments carried at fair value (liability position):				
Other liabilities, current portion:				
Foreign currency forward contracts	$ (769)	$ —	$ (769)	$ —
Other liabilities, excluding current portion:				
Foreign currency forward contracts	(132)	—	(132)	—
Total financial liabilities	$ (901)	$ —	$ (901)	$ —

The Company's VIEs invested in cash equivalents consisting of money market funds of $76.0 million as of March 31, 2016, which are valued based on Level 1 inputs. These cash equivalents are not included in the table above. The Company’s noncontrolling interest related to VIEs includes the fair value of the contingent milestone and royalty payments, which are valued based on Level 3 inputs. Please refer to Note C, “Collaborative Arrangements,” for further information.

As of March 31, 2016, the fair value and carrying value of the Company's Term Loan was $295.8 million. The fair value of the Company's Term Loan was estimated based on Level 3 inputs computed using the effective interest rate of the Term Loan. The effective interest rate considers the timing and amount of estimated future interest payments as well as current market rates. Please refer to Note K, "Long-term Obligations" for further information regarding the Company's Term Loan.

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F. Marketable Securities

A summary of the Company's cash, cash equivalents and marketable securities is shown below:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(in thousands)		
As of March 31, 2016				
Cash and cash equivalents:				
Cash and money market funds	$ 590,688	$ —	$ —	$ 590,688
Corporate debt securities	13,557	—	—	13,557
Total cash and cash equivalents	$ 604,245	$ —	$ —	$ 604,245
Marketable securities:				
U.S. Treasury securities (due within 1 year)	$ 33,108	$ —	$ (4)	$ 33,104
Government-sponsored enterprise securities (due within 1 year)	126,461	17	—	126,478
Commercial paper (due within 1 year)	141,243	319	—	141,562
Corporate debt securities (due within 1 year)	120,206	23	—	120,229
Total marketable securities	$ 421,018	$ 359	$ (4)	$ 421,373
Total cash, cash equivalents and marketable securities	$ 1,025,263	$ 359	$ (4)	$ 1,025,618
As of December 31, 2015				
Cash and cash equivalents:				
Cash and money market funds	$ 582,352	$ —	$ —	$ 582,352
Government-sponsored enterprise securities	85,994	—	—	85,994
Commercial paper	34,889	—	—	34,889
Corporate debt securities	11,533	—	—	11,533
Total cash and cash equivalents	$ 714,768	$ —	$ —	$ 714,768
Marketable securities:				
Government-sponsored enterprise securities (due within 1 year)	$ 87,176	$ —	$ (14)	$ 87,162
Commercial paper (due within 1 year)	98,877	246	—	99,123
Corporate debt securities (due within 1 year)	141,515	—	(106)	141,409
Total marketable securities	$ 327,568	$ 246	$ (120)	$ 327,694
Total cash, cash equivalents and marketable securities	$ 1,042,336	$ 246	$ (120)	$ 1,042,462

The Company has a limited number of marketable securities in insignificant loss positions as of March 31, 2016, which the Company does not intend to sell and has concluded it will not be required to sell before recovery of the amortized costs for the investment at maturity. There were no charges recorded for other-than-temporary declines in fair value of marketable securities nor gross realized gains or losses recognized in the three months ended March 31, 2016 and 2015.

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G. Accumulated Other Comprehensive (Loss) Income

A summary of the Company's changes in accumulated other comprehensive (loss) income by component is shown below:

	Foreign Currency Translation Adjustment	Unrealized Holding Gains (Losses) on Marketable Securities	Unrealized Gains (Losses) on Foreign Currency Forward Contracts, net of tax	Total
			(in thousands)	
Balance at December 31, 2015	$ (2,080)	$ 126	$ 3,778	$ 1,824
Other comprehensive (loss) income before reclassifications	(1,740)	229	(3,827)	(5,338)
Amounts reclassified from accumulated other comprehensive loss	—	—	(1,385)	(1,385)
Net current period other comprehensive (loss) income	$ (1,740)	$ 229	$ (5,212)	$ (6,723)
Balance at March 31, 2016	$ (3,820)	$ 355	$ (1,434)	$ (4,899)

	Foreign Currency Translation Adjustment	Unrealized Holding Gains on Marketable Securities	Unrealized (Losses) Gains on Foreign Currency Forward Contracts	Total
			(in thousands)	
Balance at December 31, 2014	$ (971)	$ (123)	$ 2,011	$ 917
Other comprehensive (loss) income before reclassifications	(608)	176	2,004	1,572
Amounts reclassified from accumulated other comprehensive loss	—	—	(1,698)	(1,698)
Net current period other comprehensive (loss) income	$ (608)	$ 176	$ 306	$ (126)
Balance at March 31, 2015	$ (1,579)	$ 53	$ 2,317	$ 791

H. Hedging

The Company maintains a hedging program intended to mitigate the effect of changes in foreign exchange rates for a portion of the Company’s forecasted product revenues denominated in certain foreign currencies. The program includes foreign currency forward contracts that are designated as cash flow hedges under GAAP having contractual durations from one to eighteen months.

The Company formally documents the relationship between foreign currency forward contracts (hedging instruments) and forecasted product revenues (hedged items), as well as the Company's risk management objective and strategy for undertaking various hedging activities, which includes matching all foreign currency forward contracts that are designated as cash flow hedges to forecasted transactions. The Company also formally assesses, both at the hedge’s inception and on an ongoing basis, whether the foreign currency forward contracts are highly effective in offsetting changes in cash flows of hedged items on a prospective and retrospective basis. If the Company determines that a (i) foreign currency forward contract is not highly effective as a cash flow hedge, (ii) foreign currency forward contract has ceased to be a highly effective hedge or (iii) forecasted transaction is no longer probable of occurring, the Company would discontinue hedge accounting treatment prospectively. The Company measures effectiveness based on the change in fair value of the forward contracts and the fair value of the hypothetical foreign currency forward contracts with terms that match the critical terms of the risk being hedged. As of March 31, 2016, all hedges were determined to be highly effective and the Company had not recorded any ineffectiveness related to the hedging program.

The following table summarizes the notional amount of the Company’s outstanding foreign currency forward contracts designated as cash flow hedges:

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Foreign Currency	As of March 31, 2016	As of December 31, 2015
	(in thousands)	
Euro	$ 215,343	$ 103,362
British pound sterling	76,395	78,756
Australian dollar	28,837	27,167
Total foreign currency forward contracts	$ 320,575	$ 209,285

The following table summarizes the fair value of the Company's outstanding foreign currency forward contracts designated as cash flow hedges under GAAP included on the Company's condensed consolidated balance sheets:

As of March 31, 2016

Assets		Liabilities	
Classification	Fair Value	Classification	Fair Value
	(in thousands)		
Prepaid and other current assets	$ 3,654	Other liabilities, current portion	$ (3,765)
Other assets	182	Other liabilities, excluding current portion	(657)
Total assets	$ 3,836	Total liabilities	$ (4,422)

As of December 31, 2015

Assets		Liabilities	
Classification	Fair Value	Classification	Fair Value
	(in thousands)		
Prepaid and other current assets	$ 5,161	Other liabilities, current portion	$ (769)
Other assets	605	Other liabilities, excluding current portion	(132)
Total assets	$ 5,766	Total liabilities	$ (901)

The following table summarizes the potential effect of offsetting derivatives by type of financial instrument on the Company's condensed consolidated balance sheets:

	As of March 31, 2016				
	Gross Amounts Recognized	Gross Amounts Offset	Gross Amounts Presented	Gross Amounts Not Offset	Legal Offset
Foreign currency forward contracts	(in thousands)				
Total assets	$ 3,836	$ —	$ 3,836	$ (3,836)	$ —
Total liabilities	$ (4,422)	$ —	$ (4,422)	$ 3,836	$ (586)

	As of December 31, 2015				
	Gross Amounts Recognized	Gross Amounts Offset	Gross Amounts Presented	Gross Amounts Not Offset	Legal Offset
Foreign currency forward contracts	(in thousands)				
Total assets	$ 5,766	$ —	$ 5,766	$ (901)	$ 4,865
Total liabilities	$ (901)	$ —	$ (901)	$ 901	$ —

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I. Inventories

Inventories consisted of the following:

	As of March 31, 2016	As of December 31, 2015
	(in thousands)	
Raw materials	$ 9,936	$ 8,696
Work-in-process	37,899	40,695
Finished goods	15,365	7,816
Total	$ 63,200	$ 57,207

J. Intangible Assets and Goodwill

Intangible Assets

As of March 31, 2016 and December 31, 2015, in-process research and development intangible assets of $284.3 million were recorded on the Company's condensed consolidated balance sheet.

In June 2015, in connection with entering into the Parion Agreement, the Company recorded an in-process research and development intangible asset of $255.3 million based on the Company's estimate of the fair value of Parion's lead investigational ENaC inhibitors, including VX-371 and VX-551, that were licensed by the Company from Parion. The Company aggregated the fair value of the ENaC inhibitors into a single intangible asset because the phase, nature and risks of development as well as the amount and timing of benefits associated with the assets were similar. In October 2014, the Company recorded an in-process research and development intangible asset of $29.0 million based on the Company's estimate of the fair value of VX-210, a drug candidate for patients with spinal cord injuries that was licensed by the Company from BioAxone. The Company used discount rates of 7.1% and 7.5% in the present-value models to estimate the fair values of the ENaC inhibitors and VX-210 intangible assets, respectively.

The Company also conducted an evaluation of Parion and BioAxone's other programs at the effective date of the Parion Agreement and BioAxone Agreement, respectively, and determined that market participants would not have ascribed value to those programs because of the stage of development of the assets in each program and uncertainties related to the potential development and commercialization of the programs.

Goodwill

As of March 31, 2016 and December 31, 2015, goodwill of $50.4 million was recorded on the Company's condensed consolidated balance sheet.

K. Long-term Obligations

Fan Pier Leases

In 2011, the Company entered into two lease agreements, pursuant to which the Company leases approximately 1.1 million square feet of office and laboratory space in two buildings (the "Buildings") at Fan Pier in Boston, Massachusetts (the "Fan Pier Leases"). The Company commenced lease payments in December 2013, and will make lease payments pursuant to the Fan Pier Leases through December 2028. The Company has an option to extend the term of the Fan Pier Leases for an additional ten years.

Because the Company was involved in the construction project, the Company was deemed for accounting purposes to be the owner of the Buildings during the construction period and recorded project construction costs incurred by the landlord. Upon completion of the Buildings, the Company evaluated the Fan Pier Leases and determined that the Fan Pier Leases did not meet the criteria for "sale-leaseback" treatment. Accordingly, the Company began depreciating the asset and incurring interest expense related to the financing obligation in 2013. The Company bifurcates its lease payments pursuant to the Fan Pier Leases into (i) a portion that is allocated to the Buildings and (ii) a portion that is allocated to the land on which the

Buildings were constructed. The portion of the lease obligations allocated to the land is treated as an operating lease that commenced in 2011.

Property and equipment, net, included $499.0 million and $502.3 million as of March 31, 2016 and December 31, 2015, respectively, related to construction costs for the Buildings. The carrying value of the Company's lease agreement liability for the Buildings was $472.9 million and $473.0 million as of March 31, 2016 and December 31, 2015, respectively.

San Diego Lease

On December 2, 2015, the Company entered into a lease agreement for 3215 Merryfield Row, San Diego, California with ARE-SD Region No. 23, LLC. Pursuant to this agreement, the Company agreed to lease approximately 170,000 square feet of office and laboratory space in a building to be built in San Diego, California. The lease will commence upon completion of the building, scheduled for the second half of 2017, and will extend for 16 years from the commencement date. Pursuant to the lease agreement, during the initial 16-year term, the Company will pay an average of approximately $10.2 million per year in aggregate rent, exclusive of operating expenses. The Company has the option to extend the lease term for up to two additional five-year terms.

Term Loan

In July 2014, the Company entered into a credit agreement with the lenders party thereto, and Macquarie US Trading LLC ("Macquarie"), as administrative agent. The credit agreement provides for a $300.0 million senior secured term loan ("Term Loan"). The credit agreement also provides that, subject to satisfaction of certain conditions, the Company may request that the lenders establish an incremental senior secured term loan facility in an aggregate amount not to exceed $200.0 million.

The Term Loan initially bore interest at a rate of 7.2% per annum, which was reduced to 6.2% per annum based on the FDA's approval of ORKAMBI. The Term Loan will bear interest at a rate of LIBOR plus 5.0% per annum during the third year of the term.

The maturity date of all loans under the facilities is July 9, 2017. Interest is payable quarterly and on the maturity date. In October 2015, the Company amended the terms of the credit agreement to provide for, among other things, a modification to the repayment schedule of the loan. As amended, the Company is required to repay principal on the Term Loan in quarterly installments of $75 million from October 1, 2016 through the maturity date.

The Company may prepay the Term Loan, in whole or in part, at any time; provided that prepayments prior to the July 9, 2016 are subject to a make-whole premium to ensure Macquarie receives approximately the present value of two years of interest payments over the life of the loan. The Company accounted for the amendment as a debt modification, as opposed to an extinguishment of debt, based on an insignificant change to the present value of the future cash flows relating to the credit agreement.

The Company's obligations under the Term Loan are unconditionally guaranteed by certain of its domestic subsidiaries. All obligations under the Term Loan, and the guarantees of those obligations, are secured, subject to certain exceptions, by substantially all of the Company's assets and the assets of all guarantors, including the pledge of all or a portion of the equity interests of certain of its subsidiaries.

The credit agreement requires that the Company maintain, on a quarterly basis, a minimum level of KALYDECO net revenues. Further, the credit agreement includes negative covenants, subject to exceptions, restricting or limiting the Company's ability and the ability of its subsidiaries to, among other things, incur additional indebtedness, grant liens, engage in certain investment, acquisition and disposition transactions, pay dividends, repurchase capital stock and enter into transactions with affiliates. The credit agreement also contains customary representations and warranties, affirmative covenants and events of default, including payment defaults, breach of representations and warranties, covenant defaults and cross defaults. If an event of default occurs, the administrative agent would be entitled to take various actions, including the acceleration of amounts due under outstanding loans. There have been no events of default as of or during the period ended March 31, 2016.

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Based on the Company's evaluation of the Term Loan, the Company determined that the Term Loan contains several embedded derivatives. These embedded derivatives are clearly and closely related to the host instrument because they relate to the Company's credit risk; therefore, they do not require bifurcation from the host instrument, the Term Loan.

The Company incurred $5.3 million in fees paid to Macquarie that were recorded as a discount on the Term Loan and are being recorded as interest expense using the effective interest method over the term of the loan in the Company’s condensed consolidated statements of operations. As of March 31, 2016 and December 31, 2015, the unamortized discount associated with the Term Loan that was included in the senior secured term loan caption on the Company’s condensed consolidated balance sheet was $4.0 million and $4.6 million, respectively.

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L. Stock-based Compensation Expense

During the three months ended March 31, 2016 and 2015, the Company recognized the following stock-based compensation expense included in loss from continuing operations:

	Three Months Ended March 31,	
	2016	2015
Stock-based compensation expense by type of award:		
Stock options	$ 26,260	$ 28,959
Restricted stock and restricted stock units	27,533	27,169
ESPP share issuances	2,524	2,140
Less stock-based compensation expense capitalized to inventories	(845)	(884)
Total stock-based compensation included in costs and expenses	$ 55,472	$ 57,384
Stock-based compensation expense by line item:		
Research and development expenses	$ 34,448	$ 38,217
Sales, general and administrative expenses	21,024	19,167
Total stock-based compensation included in costs and expenses	$ 55,472	$ 57,384

The following table sets forth the Company's unrecognized stock-based compensation expense, net of estimated forfeitures, by type of award and the weighted-average period over which that expense is expected to be recognized:

	As of March 31, 2016	
	Unrecognized Expense, Net of Estimated Forfeitures	Weighted-average Recognition Period
	(in thousands)	(in years)
Type of award:		
Stock options	$ 206,783	2.83
Restricted stock and restricted stock units	$ 223,184	2.78
ESPP share issuances	$ 3,143	0.49

The following table summarizes information about stock options outstanding and exercisable at March 31, 2016:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted-average Remaining Contractual Life	Weighted-average Exercise Price	Number Exercisable	Weighted-average Exercise Price
	(in thousands)	(in years)	(per share)	(in thousands)	(per share)
$18.93–$20.00	138	1.85	$ 18.93	138	$ 18.93
$20.01–$40.00	2,124	3.56	$ 34.30	2,119	$ 34.29
$40.01–$60.00	2,210	6.33	$ 48.09	1,590	$ 48.77
$60.01–$80.00	1,396	7.83	$ 75.92	654	$ 75.31
$80.01–$100.00	3,550	8.81	$ 90.65	815	$ 88.04
$100.01–$120.00	1,677	8.80	$ 109.32	402	$ 109.26
$120.01–$134.69	1,524	9.28	$ 130.63	339	$ 129.57
Total	12,619	7.36	$ 78.61	6,057	$ 59.71

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M. Other Arrangements

Sale of HIV Protease Inhibitor Royalty Stream

In 2008, the Company sold to a third party its rights to receive royalty payments from GlaxoSmithKline plc, net of royalty amounts to be earned by and due to a third party, for a one-time cash payment of $160.0 million. These royalty payments relate to net sales of HIV protease inhibitors, which had been developed pursuant to a collaboration agreement between the Company and GlaxoSmithKline plc. As of March 31, 2016, the Company had $23.2 million in deferred revenues related to the one-time cash payment, which it is recognizing over the life of the collaboration agreement with GlaxoSmithKline plc based on the units-of-revenue method. In addition, the Company continues to recognize royalty revenues equal to the amount of the third-party subroyalty and an offsetting royalty expense for the third-party subroyalty payment.

N. Income Taxes

The Company is subject to United States federal, state, and foreign income taxes. For the three months ended March 31, 2016, the Company recorded a provision for income taxes of $5.5 million. The provision for income taxes recorded in the three months ended March 31, 2016 included $3.1 million, related to the Company's VIE's income tax provision. The Company has no liability for taxes payable by the Company's VIEs and the income tax provision and related liability have been allocated to noncontrolling interest (VIE). For the three months ended March 31, 2015, the Company recorded a provision for income taxes of $0.3 million, related to state income taxes and income earned in various foreign jurisdictions.

As of each of March 31, 2016 and December 31, 2015, the Company had unrecognized tax benefits of $0.4 million. The Company recognizes interest and penalties related to income taxes as a component of income tax expense. As of March 31, 2016, no interest and penalties have been accrued. The Company does not expect that its unrecognized tax benefits will materially increase within the next twelve months. The Company did not recognize any material interest or penalties related to uncertain tax positions as of March 31, 2016 and December 31, 2015. In 2016, it is reasonably possible that the Company will reduce the balance of its unrecognized tax benefits by approximately $0.4 million due to the application of statute of limitations and settlements with taxing authorities, all of which would reduce the Company’s effective tax rate.

The Company continues to maintain a valuation allowance against certain deferred tax assets where it is more likely than not that the deferred tax asset will not be realized because of its extended history of annual losses.

The Company files United States federal income tax returns and income tax returns in various state, local and foreign jurisdictions. The Company is no longer subject to any tax assessment from an income tax examination in the United States before 2011 or any other major taxing jurisdiction for years before 2009, except where the Company has net operating losses or tax credit carryforwards that originated before 2009. The Company currently is under examination by the Internal Revenue Service for the year ended December 31, 2011 and in Delaware, Canada and Quebec for varying periods including the years ended December 31, 2011 through 2013. No adjustments have been reported. The Company is not under examination by any other jurisdictions for any tax year. The Company concluded audits with Pennsylvania and Texas during 2016 and Massachusetts and New York during 2015 with no material adjustments.

The Company currently intends to reinvest the total amount of its unremitted earnings. At March 31, 2016, foreign earnings, which were not significant, have been retained indefinitely by foreign subsidiary companies for reinvestment; therefore, no provision has been made for income taxes that would be payable upon the distribution of such earnings, and it would not be practicable to determine the amount of the related unrecognized deferred income tax liability. Upon repatriation of those earnings, in the form of dividends or otherwise, the Company would be subject to United States federal income taxes (subject to an adjustment for foreign tax credits) and withholding taxes payable to the various foreign countries.

O. Restructuring Liabilities

2003 Kendall Restructuring

In 2003, the Company adopted a plan to restructure its operations to coincide with its increasing internal emphasis on advancing drug candidates through clinical development to commercialization. The restructuring liability relates to specialized laboratory and office space that is leased to the Company pursuant to a 15-year lease that terminates in 2018. The Company has not used more than 50% of this space since it adopted the plan to restructure its operations in 2003. This unused laboratory and office space currently is subleased to third parties.

The activities related to the restructuring liability for the three months ended March 31, 2016 and 2015 were as follows:

	Three Months Ended March 31,	
	2016	2015
Liability, beginning of the period	$ 7,944	$ 11,596
Cash payments	(3,931)	(3,985)
Cash received from subleases	3,008	2,476
Restructuring expense (income)	203	(581)
Liability, end of the period	$ 7,224	$ 9,506

Fan Pier Move Restructuring

In connection with the relocation of its Massachusetts operations to Fan Pier in Boston, Massachusetts, which commenced in 2013, the Company is incurring restructuring charges related to its remaining lease obligations at its facilities in Cambridge, Massachusetts. The majority of these restructuring charges were recorded in the third quarter of 2014 upon decommissioning three facilities in Cambridge. During the first quarter of 2015, the Company terminated two of these lease agreements resulting in a credit to restructuring expense equal to the difference between the Company’s estimated future cash flows related to its lease obligations for these facilities and the termination payment paid to the Company’s landlord on the effective date of the termination. The third major facility included in this restructuring activity is 120,000 square feet of the Kendall Square Facility that the Company continued to use for its

operations following its 2003 Kendall Restructuring. The rentable square footage in this portion of the Kendall Square Facility was subleased to a third party in February 2015. The Company will continue to incur charges through April 2018 related to the difference between the Company's estimated future cash flows related to this portion of the Kendall Square Facility, which include an estimate for sublease income to be received from the Company's sublessee and its actual cash flows. The Company discounted the estimated cash flows related to this restructuring activity at a discount rate of 9%.

The activities related to the restructuring liability for the three months ended March 31, 2016 and 2015 were as follows:

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	Three Months Ended March 31,	
	2016	**2015**
Liability, beginning of the period	$ 5,964	$ 33,390
Cash payments	(3,156)	(19,256)
Cash received from subleases	2,408	—
Restructuring expense (income)	233	(2,997)
Liability, end of the period	$ 5,449	$ 11,137

Other Restructuring Activities

The Company has engaged in several other restructuring activities that are unrelated to its 2003 Kendall Restructuring and the Fan Pier Move Restructuring. The most significant activity commenced in October 2013 when the Company adopted a restructuring plan that included (i) a workforce reduction primarily related to the commercial support of INCIVEK following the continued and rapid decline in the number of patients being treated with INCIVEK as new medicines for the treatment of HCV infection neared approval and (ii) the write-off of certain assets. This action resulted from the Company's decision to focus its investment on future opportunities in CF and other research and development programs.

The activities related to the Company's other restructuring liabilities for the three months ended March 31, 2016 and 2015 were as follows:

	Three Months Ended March 31,	
	2016	**2015**
Liability, beginning of the period	$ 1,450	$ 869
Cash payments	(439)	(330)
Restructuring expense	251	306
Liability, end of the period	$ 1,262	$ 845

P. Commitments and Contingencies

Financing Arrangements

As of March 31, 2016, the Company had irrevocable stand-by letters of credit outstanding that were issued in connection with property leases and other similar agreements totaling $21.9 million that are cash collateralized. The cash used to support these letters of credit is included in restricted cash, as of March 31, 2016, on the Company's condensed consolidated balance sheet.

Litigation

On May 28, 2014, a purported shareholder class action *Local No. 8 IBEW Retirement Plan & Trust v. Vertex Pharmaceuticals Incorporated, et al.* was filed in the United States District Court for the District of Massachusetts, naming the Company and certain of the Company's current and former officers and directors as defendants. The lawsuit alleged that the Company made material misrepresentations and/or omissions of material fact in the Company's disclosures during the period from May 7, 2012 through May 29, 2012, all in violation of Section 10(b) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 promulgated thereunder. The purported class consists of all persons (excluding defendants) who purchased the Company’s common stock between May 7, 2012 and May 29, 2012. The plaintiffs seek unspecified monetary damages, costs and attorneys’ fees as well as disgorgement of the proceeds from certain individual defendants’ sales of the Company’s stock. On October 8, 2014, the Court approved Local No. 8 IBEW Retirement Fund as lead plaintiff, and Scott and Scott LLP as lead counsel for the plaintiff and the putative class. On February 23, 2015, the Company filed a reply to the plaintiffs’ opposition to its motion to dismiss. The court heard oral argument on the motion to dismiss on March 6, 2015 and

took the motion under advisement. On September 30, 2015, the court granted the Company's motion to dismiss. On October 15, 2015, the plaintiff filed a notice of appeal. The First Circuit Court of Appeals issued a scheduling order on December 24, 2015. On February 2, 2016, the Plaintiff filed their opening brief and the Company filed its opposition brief on March 7, 2016. On March 24, 2016, the plaintiff filed their reply brief. The Company believes the claims to be without merit and intend to vigorously defend the litigation. As of March 31, 2016, the Company has not recorded any reserves for this purported class action.

Guaranties and Indemnifications

As permitted under Massachusetts law, the Company’s Articles of Organization and By-laws provide that the Company will indemnify certain of its officers and directors for certain claims asserted against them in connection with their service as an officer or director. The maximum potential amount of future payments that the Company could be required to make under these indemnification provisions is unlimited. However, the Company has purchased directors’ and officers’ liability insurance policies that could reduce its monetary exposure and enable it to recover a portion of any future amounts paid. No indemnification claims currently are outstanding, and the Company believes the estimated fair value of these indemnification arrangements is minimal.

The Company customarily agrees in the ordinary course of its business to indemnification provisions in agreements with clinical trial investigators and sites in its drug development programs, sponsored research agreements with academic and not-for-profit institutions, various comparable agreements involving parties performing services for the Company, and its real estate leases. The Company also customarily agrees to certain indemnification provisions in its drug discovery, development and commercialization collaboration agreements. With respect to the Company’s clinical trials and sponsored research agreements, these indemnification provisions typically apply to any claim asserted against the investigator or the investigator’s institution relating to personal injury or property damage, violations of law or certain breaches of the Company’s contractual obligations arising out of the research or clinical testing of the Company’s compounds or drug candidates. With respect to lease agreements, the indemnification provisions typically apply to claims asserted against the landlord relating to personal injury or property damage caused by the Company, to violations of law by the Company or to certain breaches of the Company’s contractual obligations. The indemnification provisions appearing in the Company’s collaboration agreements are similar to those for the other agreements discussed above, but in addition provide some limited indemnification for its collaborator in the event of third-party claims alleging infringement of intellectual property rights. In each of the cases above, the indemnification obligation generally survives the termination of the agreement for some extended period, although the Company believes the obligation typically has the most relevance during the contract term and for a short period of time thereafter. The maximum potential amount of future payments that the Company could be required to make under these provisions is generally unlimited. The Company has purchased insurance policies covering personal injury, property damage and general liability that reduce its exposure for indemnification and would enable it in many cases to recover all or a portion of any future amounts paid. The Company has never paid any material amounts to defend lawsuits or settle claims related to these indemnification provisions. Accordingly, the Company believes the estimated fair value of these indemnification arrangements is minimal.

Other Contingencies

The Company has certain contingent liabilities that arise in the ordinary course of its business activities. The Company accrues a reserve for contingent liabilities when it is probable that future expenditures will be made and such expenditures can be reasonably estimated. There were no material contingent liabilities accrued as of March 31, 2016 or December 31, 2015.

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

OVERVIEW

We are in the business of discovering, developing, manufacturing and commercializing medicines for serious diseases. We use precision medicine approaches with the goal of creating transformative medicines for patients in specialty markets. Our business is focused on developing and commercializing therapies for the treatment of cystic fibrosis, or CF, and advancing our research and development programs in other indications, while maintaining our financial strength. Our two marketed products are ORKAMBI and KALYDECO.

Cystic Fibrosis

ORKAMBI

ORKAMBI (lumacaftor in combination with ivacaftor) was approved by the United States Food and Drug Administration, or FDA, in July 2015 and by the European Commission in November 2015, for the treatment of patients with CF twelve years of age and older who are homozygous for the F508del mutation in their cystic fibrosis transmembrane conductance regulator, or *CFTR*, gene. ORKAMBI was approved for this patient population in Canada and Australia in the first quarter of 2016. Our future ORKAMBI net product revenues in the United States will reflect the number of patients for whom treatment with ORKAMBI is initiated, the proportion of initiated patients who remain on treatment, patient compliance with the recommended treatment regimen and the level of rebates, chargebacks, discounts and other adjustments to our ORKAMBI gross product revenues. We believe that there currently are approximately 8,500 patients in the United States who are eligible for treatment with ORKAMBI. We have begun the country-by-country reimbursement approval process in ex-U.S. markets. We believe that there are approximately 12,000 patients with CF twelve years of age and older who are homozygous for the F508del mutation in Europe and approximately an aggregate of 2,500 patients with CF twelve years of age and older who are homozygous for the F508del mutation in Canada and Australia.

In late March 2016, we submitted a supplemental New Drug Application, or sNDA, to the FDA for ORKAMBI for the treatment of patients with CF six to eleven years of age who are homozygous for the F508del mutation in their *CFTR* gene. The sNDA included a request for priority review, which if granted, would reduce the FDA's anticipated review time from approximately ten months to approximately six months. The sNDA was based upon the results of a Phase 3 clinical trial evaluating lumacaftor in combination with ivacaftor in 58 patients with CF six to eleven years of age who are homozygous for the F508del mutation in their *CFTR* gene. We have completed enrollment in a second Phase 3 clinical trial evaluating lumacaftor in combination with ivacaftor in approximately 200 patients in this same patient population. If this clinical trial is successful, we expect to submit a Marketing Authorization Application to the European Medicines Agency seeking approval of ORKAMBI in this patient population in the European Union in the first half of 2017.

KALYDECO

KALYDECO (ivacaftor) was approved in 2012 in the United States and European Union as a treatment for patients with CF six years of age and older who have the G551D mutation in their *CFTR* gene. Since 2012, we have increased the number of patients who are being treated with KALYDECO in the United States and non-U.S. markets by expanding the label for KALYDECO to include patients with CF who have additional mutations in their *CFTR* gene and to include patients in additional age demographics. We believe that there are approximately 4,000 patients in North America, Europe and Australia who are currently eligible for treatment with KALYDECO.

We recently initiated a Phase 3 clinical trial for ivacaftor in patients with CF less than two years of age to evaluate the effect of ivacaftor on markers of CF disease in young children. The clinical trial will utilize a weight-based dose of ivacaftor granules that can be mixed in soft foods or liquids. The clinical trial will enroll patients with one of the ten *CFTR* gene mutations for which KALYDECO is currently approved.

VX-661

VX-661 is an orally-administered CFTR corrector drug candidate that we are evaluating in a Phase 3 development program in combination with ivacaftor in multiple CF patient populations who have at least one copy of the F508del mutation in their *CFTR* gene. Details of the patient population and status of each of these clinical trials is as follows:

- *Two copies of the F508del in their CFTR gene*: We expect to complete enrollment in mid-2016 and data from this clinical trial to be available in early 2017.
- *One copy of the F508del mutation in their CFTR gene and a second mutation in their CFTR gene that results in a gating defect in the CFTR protein*: We plan to complete enrollment in this clinical trial in late 2016 or early 2017.

- *One copy of the F508del mutation in their CFTR gene and a second mutation in their CFTR gene that results in residual CFTR function*: We have revised the enrollment target for this clinical trial. We originally expected to enroll up to 300 patients in this clinical trial and currently expect to enroll approximately 200 patients. We expect to complete enrollment in this clinical trial in the second half of 2016.
- *One copy of the F508del mutation in their CFTR gene and a second mutation that results in minimal CFTR function*: Enrollment is complete in the first part of this clinical trial and we expect an interim futility analysis of efficacy data to be completed in the third quarter of 2016.

In addition to evaluating the efficacy of the combination regimen, these Phase 3 clinical trials will provide safety data on the combination of VX-661 and ivacaftor to support the planned development of a triple combination regimen that includes a next-generation corrector in combination with VX-661 and ivacaftor.

ENaC Inhibition

VX-371 is an investigational epithelial sodium channel, or ENaC, inhibitor, we are evaluating in a Phase 2 development program in collaboration with Parion Sciences, Inc., or Parion. Parion recently completed a Phase 2 clinical trial in approximately 142 patients with CF with no restriction on the mutations in their *CFTR* gene. The primary endpoint of the clinical trial was safety as compared to patients on placebo. Secondary endpoints evaluated the effect on mean absolute forced expiratory volume in one second, or FEV_1 and patient-reported respiratory symptoms as reported in the CF questionnaire-revised, or CFQ-R. The clinical trial met its primary safety endpoint and data from the clinical trial showed that VX-371 was generally well tolerated. There were no statistically significant changes in FEV_1 or CFQ-R for patients who received VX-371.

In the first quarter of 2016, we initiated a Phase 2a clinical trial evaluating VX-371 in approximately 150 patients on ORKAMBI, both with and without the addition of hypertonic saline, who have two copies of the F508del mutation in their *CFTR* gene. The primary endpoints of this clinical trial are safety and mean absolute change from baseline in FEV_1 at day 28 as compared to patients on placebo.

In vitro, VX-371 showed a meaningful change in cilia beat frequency when VX-371 was used in combination with ORKAMBI in human bronchial epithelial cells with two copies of the F508del mutation, but did not show a meaningful change in cilia beat frequency when VX-371 was used alone.

Next-generation CFTR Corrector Compounds

We are developing two next-generation CFTR corrector compounds, VX-152 and VX-440, that we plan to evaluate as part of triple combination treatment regimens. We initiated Phase 1 clinical trials in healthy volunteers of each of VX-152 and VX-440, alone and as part of a triple combination with VX-661 and ivacaftor, in the fourth quarter of 2015. If these clinical trials are successful, we plan to initiate Phase 2 proof-of-concept clinical trials of VX-152 and/or VX-440 in the second half of 2016.

Research and Development

We are engaged in a number of other research and mid- and early-stage development programs, including in the areas of oncology, pain and neurology.

Oncology

We are conducting two Phase 1/2 clinical trials of VX-970, a protein kinase inhibitor of ataxia telangiectasia and Rad3-related, or ATR, in combination with commonly used DNA-damaging chemotherapies across a range of solid tumor types, including triple-negative breast cancer and non-small cell lung cancer. We also are in Phase 1 development of VX-803, a second ATR inhibitor, alone and in combination with chemotherapy. We recently initiated Phase 1 clinical development of VX-984, a third oncology drug candidate, alone and in combination with pegylated liposomal doxorubicin.

Pain

We are developing VX-150 and VX-241, two drug candidates for the treatment of pain. We recently initiated a six-week cross-over Phase 2 proof-of-concept clinical trial to evaluate VX-150 in approximately 100 patients with symptomatic osteoarthritis of the knee. We expect to complete enrollment of this clinical trial in the second half of 2016. We expect to begin clinical development of VX-241 in the first half of 2016.

Acute Spinal Cord Injury

We are developing VX-210, a drug candidate for the treatment of acute spinal cord injury, that we exclusively licensed from BioAxone BioSciences, Inc. VX-210 is designed to inhibit a protein known as Rho that blocks neural regeneration after injury. We recently initiated a Phase 2b/3 clinical trial to evaluate the efficacy and safety of VX-210 in patients with certain acute cervical spinal cord injuries.

Research

We plan to continue investing in our research programs and fostering scientific innovation in order to identify and develop transformative medicines. We believe that pursuing research in diverse areas allows us to balance the risks inherent in drug development and may provide drug candidates that will form our pipeline in future years.

Drug Discovery and Development

Discovery and development of a new pharmaceutical product is a difficult and lengthy process that requires significant financial resources along with extensive technical and regulatory expertise and can take 10 to 15 years or more. Potential drug candidates are subjected to rigorous evaluations, driven in part by stringent regulatory considerations, designed to generate information concerning efficacy, side-effects, proper dosage levels and a variety of other physical and chemical characteristics that are important in determining whether a drug candidate should be approved for marketing as a pharmaceutical product. Most chemical compounds that are investigated as potential drug candidates never progress into development, and most drug candidates that do advance into development never receive marketing approval. Because our investments in drug candidates are subject to considerable risks, we closely monitor the results of our discovery, research, clinical trials and nonclinical studies and frequently evaluate our drug development programs in light of new data and scientific, business and commercial insights, with the objective of balancing risk and potential. This process can result in abrupt changes in focus and priorities as new information becomes available and as we gain additional understanding of our ongoing programs and potential new programs, as well as those of our competitors.

If we believe that data from a completed registration program support approval of a drug candidate, we submit an NDA to the FDA requesting approval to market the drug candidate in the United States and seek analogous approvals from comparable regulatory authorities in foreign jurisdictions. To obtain approval, we must, among other things, demonstrate with evidence gathered in nonclinical studies and well-controlled clinical trials that the drug candidate is safe and effective for the disease it is intended to treat and that the manufacturing facilities, processes and controls for the manufacture of the drug candidate are adequate. The FDA and foreign regulatory authorities have substantial discretion in deciding whether or not a drug candidate should be granted approval based on the benefits and risks of the drug candidate in the treatment of a particular disease, and could delay, limit or deny regulatory approval. If regulatory delays are significant or regulatory approval is limited or denied altogether, our financial results and the commercial prospects for the drug candidate involved will be harmed.

Regulatory Compliance

Our marketing of pharmaceutical products is subject to extensive and complex laws and regulations. We have a corporate compliance program designed to actively identify, prevent and mitigate risk through the implementation of compliance policies and systems, and through the promotion of a culture of compliance. Among other laws, regulations and standards, we are subject to various United States federal and state laws, and comparable foreign laws pertaining to health care fraud and abuse, including anti-kickback and false claims statutes, and laws prohibiting the promotion of drugs for unapproved or off-label uses. Anti-kickback laws make it illegal for a prescription drug manufacturer to solicit, offer, receive or pay any remuneration to induce the referral of business, including the purchase or prescription of a particular drug. False claims laws prohibit anyone from presenting for payment to third-party payors, including Medicare and Medicaid, claims for reimbursed drugs or services that are false or fraudulent, claims for items or services not provided as claimed, or claims for medically unnecessary items or services. We expect to continue to devote substantial resources to maintain, administer and expand these compliance programs globally.

Reimbursement

Sales of our products depend, to a large degree, on the extent to which our products are covered by third-party payors, such as government health programs, commercial insurance and managed health care organizations. We dedicate substantial management and other resources in order to obtain and maintain appropriate levels of reimbursement for our products from third-party payors, including governmental organizations in the United States and ex-U.S. markets. In the United States, we continue to engage in discussions with numerous commercial insurers and managed health care organizations, along with government health programs that are typically managed by authorities in the individual states. Following the European Commission’s November 2015 approval of ORKAMBI in Europe, we are working to obtain government reimbursement for

ORKAMBI on a country-by-country basis, because in many foreign countries patients are unable to access prescription pharmaceutical products that are not reimbursed by their governments. Consistent with our experience with KALYDECO when it was first approved, we expect reimbursement discussions in ex-U.S. markets may take a significant period of time.

RESULTS OF OPERATIONS

	Three Months Ended March 31,		Increase/(Decrease)	
	2016	2015	$	%
	(in thousands)			
Revenues	$ 398,080	$ 138,509	$ 259,571	187 %
Operating costs and expenses	412,410	310,494	101,916	33 %
Other items, net	(27,301)	(26,621)	(680)	(3)%
Net loss attributable to Vertex	$ (41,631)	$ (198,606)	$ (156,975)	(79)%

Net Loss Attributable to Vertex

Net loss attributable to Vertex was $41.6 million in the first quarter of 2016 compared to a net loss attributable to Vertex of $198.6 million in the first quarter of 2015. Our revenues increased significantly in the first quarter of 2016 as compared to the first quarter of 2015 due to net product revenues from ORKAMBI, which was approved by the FDA in July 2015, and increased KALYDECO net product revenues. Our operating costs and expenses increased in the first quarter of 2016 as compared to the first quarter of 2015 primarily due to increases in research and development expenses, sales, general and administrative expenses and cost of product revenues. In the near term, we expect net loss (income) attributable to Vertex will be dependent on expected increases in ORKAMBI net product revenues.

Diluted Net Loss Per Share Attributable to Vertex Common Shareholders

Diluted net loss per share attributable to Vertex common shareholders was $0.17 in the first quarter of 2016 as compared to a diluted net loss per share attributable to Vertex common shareholders of $0.83 in the first quarter of 2015.

Revenues

	Three Months Ended March 31,		Increase/(Decrease)	
	2016	2015	$	%
	(in thousands)			
Product revenues, net	$ 394,410	$ 130,875	$ 263,535	201 %
Royalty revenues	3,596	6,792	(3,196)	(47)%
Collaborative revenues	74	842	(768)	(91)%
Total revenues	$ 398,080	$ 138,509	$ 259,571	187 %

Product Revenues, Net

	Three Months Ended March 31,		Increase/(Decrease)	
	2016	2015	$	%
	(in thousands)			
ORKAMBI	$ 223,128	$ —	N/A	N/A
KALYDECO	170,509	130,174	40,335	31%
INCIVEK	773	701	72	10%
Total product revenues, net	$ 394,410	$ 130,875	$ 263,535	201%

Our total net product revenues increased in the first quarter of 2016 as compared to the first quarter of 2015 due to net product revenues from ORKAMBI, which was approved by the FDA in July 2015, and increased KALYDECO net product revenues.

We believe that the level of our ORKAMBI revenues for the remainder of 2016 will be dependent on:

- the number of additional patients who begin treatment with ORKAMBI;
- the rate at which additional patients initiate treatment;
- the proportion of initiated patients who remain on treatment; and
- the compliance rate for patients who remain on treatment.

In the first quarter of 2016, revenues from additional patients who began treatment with ORKAMBI in the United States were largely offset by discontinuations by patients who had previously initiated treatment with ORKAMBI. We expect ORKAMBI net product revenues to increase during the remainder of 2016 as compared to the first quarter of 2016. Initially, we expect that our ex-U.S. ORKAMBI net product revenues will be primarily from Germany due to the time it will take to complete the reimbursement discussions in other European countries. In the first quarter of 2016, we recognized approximately $8.8 million in ex-U.S. revenues, which were mainly from Germany.

KALYDECO net product revenues were $170.5 million in the first quarter of 2016, including $75.6 million of net product revenues from ex-U.S. markets. The increase in KALYDECO net product revenues in the first quarter of 2016, as compared to the first quarter of 2015, was primarily due to additional patients being treated with KALYDECO as we completed reimbursement discussions in various jurisdictions and increased the number of patients eligible to receive KALYDECO through multiple label expansions.

We have withdrawn INCIVEK from the market in the United States. We may continue to recognize small incremental INCIVEK revenues over the next several quarters as we adjust our INCIVEK reserves for rebates, chargebacks and discounts.

Royalty Revenues

Our royalty revenues were $3.6 million in the first quarter of 2016 as compared to $6.8 million in the first quarter of 2015. Our royalty revenues consist of (i) revenues related to a cash payment we received in 2008 when we sold our rights to certain HIV royalties and (ii) revenues related to certain third-party royalties payable by our collaborators on sales of HIV and HCV drugs that also result in corresponding royalty expenses.

Collaborative Revenues

Our collaborative revenues were $0.1 million in the first quarter of 2016 as compared to $0.8 million in the first quarter of 2015. Our collaborative revenues have historically fluctuated significantly from one period to another and may continue to fluctuate in the future.

Operating Costs and Expenses

	Three Months Ended March 31,		Increase/(Decrease)	
	2016	2015	$	%
	(in thousands)			
Cost of product revenues	$ 49,789	$ 9,381	$ 40,408	431 %
Royalty expenses	860	2,926	(2,066)	(71)%
Research and development expenses	255,860	215,599	40,261	19 %
Sales, general and administrative expenses	105,214	85,860	19,354	23 %
Restructuring expenses (income), net	687	(3,272)	N/A	N/A
Total costs and expenses	$ 412,410	$ 310,494	$ 101,916	33 %

Cost of Product Revenues

Our cost of product revenues includes the cost of producing inventories that correspond to product revenues for the reporting period, plus the third-party royalties payable on our net sales of our products. Pursuant to our agreement with Cystic Fibrosis Foundation Therapeutics Incorporated, or CFFT, our tiered third-party royalties on sales of KALYDECO and ORKAMBI, calculated as a percentage of net sales, range from the single digits to the sub-teens. Our cost of product revenues increased in the first quarter of 2016 as compared to the first quarter of 2015 due to increased net product revenues as well as the second and final $13.9 million commercial milestone that was earned by CFFT in the first quarter of 2016 related to sales of ORKAMBI. In future periods, our cost of product revenues will not be affected by commercial milestones on ORKAMBI, with our cost of product revenues generally tracking our net product revenues.

Royalty Expenses

Royalty expenses include third-party royalties payable upon net sales of telaprevir by our collaborators in their territories and expenses related to a subroyalty payable to a third party on net sales of an HIV protease inhibitor sold by GlaxoSmithKline. Royalty expenses do not include royalties we pay to CFFT on sales of KALYDECO and ORKAMBI, which instead are included in cost of product revenues. Royalty expenses in the first quarter of 2016 decreased by $2.1 million, or 71%, as compared to the first quarter of 2015, primarily as a result of decreased INCIVO (telaprevir) sales by our collaborator Janssen NV.

Research and Development Expenses

	Three Months Ended March 31,		Increase/(Decrease)	
	2016	2015	$	%
	(in thousands)			
Research expenses	$ 63,010	$ 65,562	$ (2,552)	(4)%
Development expenses	192,850	150,037	42,813	29 %
Total research and development expenses	$ 255,860	$ 215,599	$ 40,261	19 %

Our research and development expenses include internal and external costs incurred for research and development of our drugs and drug candidates. We do not assign our internal costs, such as salary and benefits, stock-based compensation expense, laboratory supplies and other direct expenses and infrastructure costs, to individual drugs or drug candidates, because the employees within our research and development groups typically are deployed across multiple research and development programs. These internal costs are significantly greater than our external costs, such as the costs of services provided to us by clinical research organizations and other outsourced research, which we allocate by individual program. All research and development costs for our drugs and drug candidates are expensed as incurred.

Since January 1, 2013, we have incurred $3.0 billion in research and development expenses associated with drug discovery and development. The successful development of our drug candidates is highly uncertain and subject to a number of risks. In addition, the duration of clinical trials may vary substantially according to the type, complexity and novelty of the drug candidate and the disease indication being targeted. The FDA and comparable agencies in foreign countries impose substantial requirements on the introduction of therapeutic pharmaceutical products, typically requiring lengthy and detailed laboratory and clinical testing procedures, sampling activities and other costly and time-consuming procedures. Data obtained from nonclinical and clinical activities at any step in the testing process may be adverse and lead to discontinuation or redirection of development activities. Data obtained from these activities also are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. The duration and cost of discovery, nonclinical studies and clinical trials may vary significantly over the life of a project and are difficult to predict. Therefore, accurate and meaningful estimates of the ultimate costs to bring our drug candidates to market are not available.

In 2015 and the three months ended March 31, 2016, costs related to our CF programs represented the largest portion of our development costs. Any estimates regarding development and regulatory timelines for our drug candidates are highly subjective and subject to change. We cannot make a meaningful estimate when, if ever, our clinical development programs will generate revenues and cash flows.

Research Expenses

	Three Months Ended March 31,		Increase/(Decrease)	
	2016	2015	$	%
	(in thousands)			
Research Expenses:				
Salary and benefits	$ 20,710	$ 20,456	$ 254	1 %
Stock-based compensation expense	10,656	13,776	(3,120)	(23)%
Laboratory supplies and other direct expenses	9,874	9,168	706	8 %
Outsourced services	4,161	4,558	(397)	(9)%
Infrastructure costs	17,609	17,604	5	— %
Total research expenses	$ 63,010	$ 65,562	$ (2,552)	(4)%

We maintain a substantial investment in research activities. Our research expenses decreased by 4% in the first quarter of 2016 as compared to the first quarter of 2015. We expect to continue to invest in our research programs with a focus on identifying drug candidates with the goal of creating transformative medicines.

Development Expenses

	Three Months Ended March 31,		Increase/(Decrease)	
	2016	2015	$	%
	(in thousands)			
Development Expenses:				
Salary and benefits	$ 44,351	$ 42,195	$ 2,156	5 %
Stock-based compensation expense	23,792	24,441	(649)	(3)%
Laboratory supplies and other direct expenses	8,250	6,944	1,306	19 %
Outsourced services	84,488	50,094	34,394	69 %
Drug supply costs	2,653	1,583	1,070	68 %
Infrastructure costs	29,316	24,780	4,536	18 %
Total development expenses	$ 192,850	$ 150,037	$ 42,813	29 %

Our development expenses increased by $42.8 million or 29% in the first quarter of 2016 as compared to the first quarter of 2015, primarily due to an increase in outsourced services related to ongoing clinical trials, including our Phase 3 development program for VX-661 in combination with ivacaftor, and an increase in infrastructure costs.

Sales, General and Administrative Expenses

	Three Months Ended March 31,		Increase/(Decrease)	
	2016	2015	$	%
	(in thousands)			
Sales, general and administrative expenses	$ 105,214	$ 85,860	$ 19,354	23%

Sales, general and administrative expenses increased by 23% in the first quarter of 2016 as compared to the first quarter of 2015, primarily due to increased investment in commercial support for ORKAMBI in ex-U.S. markets. We expect sales, general and administrative expenses during the remainder of 2016 will be similar to our sales, general and administrative expenses in the first quarter of 2016.

Restructuring Expense, Net

We recorded restructuring expenses of $0.7 million in the first quarter of 2016 as compared to restructuring credits of $3.3 million in the first quarter of 2015. Our restructuring credits in the the first quarter of 2015 were primarily related to the early termination of two leases in Cambridge, Massachusetts in connection with the relocation of our corporate headquarters to Boston, Massachusetts for which we had accrued a restructuring liability in excess of the termination fee we ultimately paid. Our restructuring expenses in the the first quarter of 2016 primarily relates to adjustments to our restructuring liability in connection with this relocation.

Other Items

Interest Expense, Net

Interest expense, net was $20.7 million in the first quarter of 2016 as compared to $21.3 million in the first quarter of 2015. During the remainder of 2016, we expect to incur approximately $45 million of interest expense associated with the leases for our corporate headquarters and approximately $13 million of interest expense related to our credit agreement.

Other Income (Expense), Net

Other income (expense), net was $4.4 million in the first quarter of 2016 as compared to an expense of $5.1 million in the first quarter of 2015. Other income (expense), net in each of the first quarter of 2016 and the first quarter of 2015 was primarily due to foreign exchange gains and losses, respectively.

Income Taxes

We recorded a provision for income taxes of $5.5 million in the first quarter of 2016 as compared to $0.3 million in the first quarter of 2015. The provision for income taxes in the first quarter of 2016 was due to income tax on our VIEs, as well as state and foreign tax in various jurisdictions.

LIQUIDITY AND CAPITAL RESOURCES

As of March 31, 2016, we had cash, cash equivalents and marketable securities of $1.03 billion, which represented a decrease of $17 million from $1.04 billion as of December 31, 2015. In the first quarter of 2016, we largely maintained our cash, cash equivalents and marketable securities balance due to increased cash receipts in the first quarter of 2016 from product sales, offset by increased cash expenditures in the first quarter of 2016 related to, among other things, research and development expenses and sales, general and administrative expenses.

Our future cash flows will be substantially dependent on product sales of KALYDECO and ORKAMBI.

Sources of Liquidity

We intend to rely on our existing cash, cash equivalents and marketable securities together with cash flows from product sales as our primary source of liquidity. We are receiving cash flows from sales of ORKAMBI and KALYDECO from the United States and ex-U.S. markets. We expect ORKAMBI net product revenues to continue to increase during the remainder of 2016. Initially, we expect that our ex-U.S. ORKAMBI net product revenues will be primarily from Germany due to the time it will take to complete the reimbursement discussions in other European countries.

We borrowed $300.0 million under a credit agreement that we entered into in July 2014 and, subject to certain conditions, we may request up to an additional $200.0 million pursuant to that credit agreement. In recent periods, we also have received significant proceeds from the issuance of common stock under our employee benefit plans, but the amount and timing of future proceeds from employee benefits plans is uncertain. Other possible sources of liquidity include strategic collaborative agreements that include research and/or development funding, commercial debt, public and private offerings of our equity and debt securities, development milestones and royalties on sales of products, software and equipment leases, strategic sales of assets or businesses and financial transactions. Negative covenants in our credit agreement may prohibit or limit our ability to access these sources of liquidity.

Future Capital Requirements

We incur substantial operating expenses to conduct research and development activities and to operate our organization. Under the terms of our credit agreement, we are required to repay the principal amount on the $300.0 million we borrowed in July 2014 in installments of $75 million on each of October 1, 2016, January 1, 2017, April 1, 2017 and July 9, 2017. We also have substantial facility and capital lease obligations, including leases for two buildings in Boston, Massachusetts that continue through 2028. In addition, we have entered into certain collaboration agreements with third parties that include the funding of certain research, development and commercialization efforts with the potential for future milestone and royalty payments by us upon the achievement of pre-established developmental and regulatory targets.

We expect that cash flows from KALYDECO and ORKAMBI, together with our current cash, cash equivalents and marketable securities will be sufficient to fund our operations for at least the next twelve months. The adequacy of our available funds to meet our future operating and capital requirements will depend on many factors, including the amounts of future revenues generated by KALYDECO and ORKAMBI and the potential introduction of one or more of our other drug candidates to the market, the level of our business development activities and the number, breadth, cost and prospects of our research and development programs.

Financing Strategy

In July 2014, we borrowed $300.0 million pursuant to a credit agreement. In addition, subject to certain conditions, we may request that the lenders loan us up to an additional $200.0 million under the credit agreement. We may raise additional capital through public offerings or private placements of our securities or securing new collaborative agreements or other methods of financing. We will continue to manage our capital structure and will consider all financing opportunities, whenever they may occur, that could strengthen our long-term liquidity profile. There can be no assurance that any such financing opportunities will be available on acceptable terms, if at all.

CONTRACTUAL COMMITMENTS AND OBLIGATIONS

Our commitments and obligations were reported in our Annual Report on Form 10-K for the year ended December 31, 2015, which was filed with the Securities and Exchange Commission, or SEC, on February 16, 2016. There have been no material changes from the contractual commitments and obligations previously disclosed in that Annual Report on Form 10-K.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analysis of our financial condition and results of operations is based upon our condensed consolidated financial statements prepared in accordance with generally accepted accounting principles in the United States. The preparation of these financial statements requires us to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenues and expenses during the reported periods. These items are monitored and analyzed by management for changes in facts and circumstances, and material changes in these estimates could occur in the future. Changes in estimates are reflected in reported results for the period in which the change occurs. We base our estimates on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from our estimates if past experience or other assumptions do not turn out to be substantially accurate. During the three months ended March 31, 2016, there were no material changes to our critical accounting policies as reported in our Annual Report on Form 10-K for the year ended December 31, 2015, which was filed with the SEC on February 16, 2016.

RECENT ACCOUNTING PRONOUNCEMENTS

For a discussion of recent accounting pronouncements please refer to Note A, “Nature of Business and Accounting Policies—Recent Accounting Pronouncements,” in the 2015 Annual Report on Form 10-K. There were no new accounting pronouncements adopted during the three months ended March 31, 2016 that had a material effect on our financial statements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

As part of our investment portfolio, we own financial instruments that are sensitive to market risks. The investment portfolio is used to preserve our capital until it is required to fund operations, including our research and development activities. None of these market risk-sensitive instruments are held for trading purposes.

Interest Rate Risk

As of March 31, 2016, we invest our cash in a variety of financial instruments, principally money market funds, short-term government-sponsored enterprise securities, U.S. Treasury securities, investment-grade corporate bonds and commercial paper. These investments are denominated in U.S. dollars. All of our interest-bearing securities are subject to interest rate risk and could decline in value if interest rates fluctuate. Substantially all of our investment portfolio consists of marketable securities with active secondary or resale markets to help ensure portfolio liquidity, and we have implemented guidelines limiting the term-to-maturity of our investment instruments. Due to the conservative nature of these instruments, we do not believe that we have a material exposure to interest rate risk.

Foreign Exchange Market Risk

As a result of our foreign operations, we face exposure to movements in foreign currency exchange rates, primarily the Euro, Swiss Franc, British Pound, Australian Dollar and Canadian Dollar against the U.S. dollar. The current exposures arise primarily from cash, accounts receivable, intercompany receivables, payables and inventories. Both positive and negative affects to our net revenues from international product sales from movements in foreign currency exchange rates are partially mitigated by the natural, opposite affect that foreign currency exchange rates have on our international operating costs and expenses.

We maintain a foreign currency management program with the objective of reducing the impact of exchange rate fluctuations on our operating results and forecasted revenues and expenses denominated in foreign currencies.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our chief executive officer and chief financial officer, after evaluating the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of the

end of the period covered by this Quarterly Report on Form 10-Q, have concluded that, based on such evaluation, as of March 31, 2016 our disclosure controls and procedures were effective and designed to provide reasonable assurance that the information required to be disclosed is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. In designing and evaluating our disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Changes in Internal Controls 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 Securities Exchange Act of 1934, as amended) occurred during the three months ended March 31, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting other than the implementation of a new equity administrative and accounting system, together with related adjustments to our systems controls, in the first quarter of 2016.

PART II. Other Information

Item 1. Legal Proceedings

Local No. 8 IBEW Retirement Plan & Trust v. Vertex Pharmaceuticals Incorporated, et al.

On May 28, 2014, a purported shareholder class action *Local No. 8 IBEW Retirement Plan & Trust v. Vertex Pharmaceuticals Incorporated, et al.* was filed in the United States District Court for the District of Massachusetts, naming us and certain of our current and former officers and directors as defendants. The lawsuit alleged that we made material misrepresentations and/or omissions of material fact in our disclosures during the period from May 7, 2012 through May 29, 2012, all in violation of Section 10(b) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 promulgated thereunder. The purported class consists of all persons (excluding defendants) who purchased our common stock between May 7, 2012 and May 29, 2012. The plaintiffs seek unspecified monetary damages, costs and attorneys' fees as well as disgorgement of the proceeds from certain individual defendants' sales of our stock. On October 8, 2014, the Court approved Local No. 8 IBEW Retirement Fund as lead plaintiff, and Scott and Scott LLP as lead counsel for the plaintiff and the putative class. We filed a motion to dismiss the complaint on December 8, 2014 and the plaintiffs filed their opposition to our motion to dismiss on January 22, 2015. On February 23, 2015, we filed a reply to the plaintiffs' opposition to our motion to dismiss. The court heard oral argument on our motion to dismiss on March 6, 2015 and took the motion under advisement. On September 30, 2015, the court granted our motion to dismiss. On October 15, 2015, the plaintiff filed a notice of appeal. The First Circuit Court of Appeals issued a scheduling order on December 24, 2015. On February 2, 2016, the Plaintiff filed their opening brief and we filed our opposition brief on March 7, 2016. On March 24, 2016, the plaintiff filed their reply brief. We believe the claims to be without merit and intend to vigorously defend the litigation.

DOJ Subpoena

In the third quarter of 2015, we received a subpoena from the United States Department of Justice related to our marketed medicines. This subpoena requests documents relating primarily to our Good Laboratory Practices in a bioanalytical laboratory. We are in the process of responding to the subpoena and intend to continue to cooperate.

Item 1A. Risk Factors

Information regarding risk factors appears in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2015, which was filed with the SEC on February 16, 2016. There have been no material changes from the risk factors previously disclosed in that Annual Report on Form 10-K.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q and, in particular, our Management's Discussion and Analysis of Financial Condition and Results of Operations set forth in Part I-Item 2, contain or incorporate a number of forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding:

- our expectations regarding the amount of, timing of and trends with respect to our revenues, costs and expenses and other gains and losses, including those related to net product revenues from KALYDECO and ORKAMBI;
- our expectations regarding clinical trials, development timelines and regulatory authority filings and submissions for ivacaftor, lumacaftor, VX-661, VX-371 (formerly P-1037), VX-152, VX-440, VX-970, VX-803, VX-984, VX-150, VX-241 and VX-210, as well as the sNDA for ORKAMBI for the treatment of patients with CF six to eleven years of age who are homozygous for the F508del mutation in their *CFTR* gene;
- our expectations regarding planned clinical trials for next-generation correctors based upon pre-clinical data;
- our ability to successfully market KALYDECO and ORKAMBI or any of our other drug candidates for which we obtain regulatory approval;
- our expectations regarding the timing and structure of clinical trials of our drugs and drug candidates, including ivacaftor, lumacaftor, VX-661, VX-371 (formerly P-1037), VX-152, VX-440, VX-970, VX-803, VX-984, VX-150, VX-241 and VX-210, and the expected timing of our receipt of data from our ongoing and planned clinical trial;
- the data that will be generated by ongoing and planned clinical trials and the ability to use that data to advance compounds, continue development or support regulatory filings;
- our beliefs regarding the support provided by clinical trials and preclinical and nonclinical studies of our drug candidates for further investigation, clinical trials or potential use as a treatment;
- our plan to continue investing in our research and development programs and our strategy to develop our drug candidates, alone or with third party-collaborators;
- the establishment, development and maintenance of collaborative relationships;
- potential business development activities;
- potential fluctuations in foreign currency exchange rates;
- our ability to use our research programs to identify and develop new drug candidates to address serious diseases and significant unmet medical needs; and
- our liquidity and our expectations regarding the possibility of raising additional capital.

Any or all of our forward-looking statements in this Quarterly Report on Form 10-Q may turn out to be wrong. They can be affected by inaccurate assumptions or by known or unknown risks and uncertainties. Many factors mentioned in this Quarterly Report on Form 10-Q will be important in determining future results. Consequently, no forward-looking statement can be guaranteed. Actual future results may vary materially from expected results. We also provide a cautionary discussion of risks and uncertainties under "Risk Factors" in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2015, which was filed with the SEC on February 16, 2016. These are factors and uncertainties that we think could cause our actual results to differ materially from expected results. Other factors and uncertainties besides those listed there could also adversely affect us.

Without limiting the foregoing, the words "believes," "anticipates," "plans," "intends," "expects" and similar expressions are intended to identify forward-looking statements. There are a number of factors and uncertainties that could cause actual events or results to differ materially from those indicated by such forward-looking statements, many of which are beyond our control. In addition, the forward-looking statements contained herein represent our estimate only as of the date of this filing and should not be relied upon as representing our estimate as of any subsequent date. While we may elect to update these

forward-looking statements at some point in the future, we specifically disclaim any obligation to do so to reflect actual results, changes in assumptions or changes in other factors affecting such forward-looking statements.

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

Issuer Repurchases of Equity Securities

The table set forth below shows all repurchases of securities by us during the three months ended March 31, 2016:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs
January 1, 2016 to January 31, 2016	13,645	$0.01	—	—
February 1, 2016 to February 29, 2016	9,930	$0.01	—	—
March 1, 2016 to March 31, 2016	66,312	$0.01	—	—

The repurchases were made under the terms of our Amended and Restated 2006 Stock and Option Plan and our Amended and Restated 2013 Stock and Option Plan. Under these plans, we award shares of restricted stock to our employees that typically are subject to a lapsing right of repurchase by us. We may exercise this right of repurchase if a restricted stock recipient's service to us is terminated. If we exercise this right, we are required to repay the purchase price paid by or on behalf of the recipient for the repurchased restricted shares, which typically is the par value per share of $0.01. Repurchased shares are returned and are available for future awards under the terms of our Amended and Restated 2013 Stock and Option Plan.

Item 6. Exhibits

Exhibit Number	Exhibit Description
3.1	Amended and Restated By-Laws of Vertex Pharmaceuticals Incorporated, as subsequently amended on April 26, 2016.
31.1	Certification of the Chief Executive Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Chief Financial Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of the Chief Executive Officer and the Chief Financial Officer under Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation
101.LAB	XBRL Taxonomy Extension Labels
101.PRE	XBRL Taxonomy Extension Presentation
101.DEF	XBRL Taxonomy Extension Definition

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.

Vertex Pharmaceuticals Incorporated

May 3, 2016 By: /s/ Ian F. Smith

Ian F. Smith

Executive Vice President and Chief Financial Officer
(principal financial officer and
duly authorized officer)

Exhibit 3.1

AMENDED AND RESTATED
BY-LAWS
of
VERTEX PHARMACEUTICALS INCORPORATED

ARTICLE I

STOCKHOLDERS

Section 1. Annual Meeting. The annual meeting of the stockholders shall be held on the second Monday of May in each year, or on such other date within six months after the end of the fiscal year of the Corporation as the Board of Directors shall fix, at such time as shall be fixed by the Board of Directors in the call of the meeting. Purposes for which an annual meeting is to be held, in addition to those prescribed by law, by the Articles of Organization, or by these By-Laws, may be specified by the Board of Directors in the notice of the meeting.

Section 2. Special Meeting in Lieu of Annual Meeting. If no annual meeting has been held in accordance with the foregoing provisions, a special meeting of the stockholders may be held in lieu thereof. Any action taken at such special meeting shall have the same force and effect as if taken at the annual meeting, and in such case all references in these By-Laws to the annual meeting of the stockholders shall be deemed to refer to such special meeting. Any such special meeting shall be called as provided in Section 3 of this Article 1.

Section 3. Special Meetings. A special meeting of the stockholders may be called at any time by the Chairman of the Board, the President, or by the Board of Directors. A special meeting of the stockholders shall also be called by the Clerk (or, in the case of the death, absence, incapacity, or refusal of the Clerk, by any other officer) upon written application of one or more stockholders who hold at least forty percent in interest of the capital stock entitled to vote at the meeting. Each call of a meeting shall state the place, date, hour, and purposes of the meeting.

Section 4. Place of the Meetings. All meetings of the stockholders shall be held at such place, either within or without The Commonwealth of Massachusetts, within the United States as shall be fixed by the Board of Directors in the notice of the meeting. Any adjourned session of any meeting of the stockholders shall be held within the United States at the place designated in the vote of adjournment.

Section 5. Notice of Meeting. A written notice of each meeting of stockholders, stating the place, date, hour and purposes of the meeting, shall be given at least seven days before the meeting to each stockholder entitled to vote thereat and to each stockholder who, by law, by the Articles of Organization, or by these By-Laws, is entitled to notice. Such notice shall be given by the Clerk or an Assistant Clerk or by an officer designated by the Board of Directors. Whenever notice of a meeting is required to be given to a stockholder under any provision of the Business Corporation Law of the Commonwealth of Massachusetts or of the Articles of Organization or these By-Laws, a written waiver thereof, executed before or after the meeting by such stockholder or his attorney thereunto authorized and filed with the records of the meeting, shall be deemed equivalent to such notice.

Section 6. Quorum of Stockholders. At any meeting of the stockholders, a quorum shall consist of a majority in interest of all stock issued and outstanding and entitled to vote at the meeting, except when a larger quorum is required by law, by the Articles of Organization, or by these By-Laws. Stock owned directly or indirectly by the Corporation, if any, shall not be deemed outstanding for this purpose.

Section 7. Adjournment of Meetings. Any meeting of the stockholders may be adjourned (a) prior to the time the meeting has been convened, by the Board of Directors, or (b) after the meeting has been convened, by a majority of the votes properly cast upon the question, whether or not a quorum is present at the meeting, and the meeting may be held as adjourned without further notice.

Section 8. Action by Vote. When a quorum is present at any meeting, (a) upon any question other than an election of a director, a majority of the votes properly cast shall decide the question, except when a larger vote is required by law, by the Articles of Organization, or by these By-Laws, (b) in an uncontested election, votes properly cast in favor of election of a director exceeding the votes properly withheld in such election shall effect the election of a director, and (c) in a contested election, a plurality of the votes properly cast for election shall effect the election of a director. An election of directors shall be considered contested if, as of the record date for the applicable meeting, there are more nominees for election than positions on the board of directors to be filled by election at the meeting. All other elections of directors shall be considered uncontested.

Section 9. Voting. Stockholders entitled to vote shall have one vote for each share of stock held by them of record according to the records of the Corporation, unless otherwise provided by the Articles of Organization. No ballot shall be required for any vote for election to any office unless requested by a stockholder present or represented at the meeting and entitled to vote in such election. The Corporation shall not, directly or indirectly, vote any share of its own stock.

Section 10. Proxies. To the extent permitted by law, stockholders entitled to vote may vote either in person or by written proxy. Unless otherwise specified or limited by their terms, such proxies shall entitle the holders thereof to vote at any adjournment of such meeting but shall not be valid after the final adjournment of such meeting.

Section 11. Action by Consent. Any action required or permitted to be taken at any meeting of the stockholders may be taken without a meeting, but only if all stockholders entitled to vote on the matter consent to the action in writing and the written consents are filed with the records of meetings of stockholders. Such consents shall be treated for all purposes as a vote taken at a meeting.

ARTICLE II

BOARD OF DIRECTORS

Section 1. Number, Elections and Terms. Subject to the rights of the holders of Preferred Stock to elect one or more additional directors under specified circumstances as provided in Article 4 of the Articles of Organization, the Board of Directors shall consist of not less than three nor more than eleven persons, the exact number to be fixed from time to time by the Board of Directors pursuant to a resolution adopted by a majority vote of the directors then in office. The Board of Directions shall be classified with respect to the time for which they shall severally hold office

by dividing them into three classes, as nearly equal in number as possible, with the term of office of one class expiring at the annual meeting of stockholders each year. At each annual meeting of the stockholders of the Corporation, the successors to the class of directors whose terms expire at that meeting shall be elected to hold office for terms expiring at the annual meeting of stockholders held in the third year following the year of their election. If the number of directors is changed, any increase or decrease shall be apportioned by the Board of Directors among the classes so as to maintain the number of directors in each class as nearly equal as possible. Each director shall hold office until the annual meeting for the year in which such director's term expires and until such director's successor shall be elected and shall qualify. No director need be a stockholder.

Section 2. Nomination. Nominations for the election of directors may be made by the Board of Directors or a committee appointed by the Board of Directors or by any stockholder entitled to vote in the election of directors generally. However, any stockholder entitled to vote in the election of directors generally may nominate one of more persons for election as directors at a meeting only if written notice of such stockholder's intent to make such nomination or nominations has been given, either by personal delivery or by mailing it, postage prepaid, to the Clerk of the Corporation not later than (a) with respect to an election to be held at an annual meeting of stockholders, ninety (90) days prior to the anniversary date of the immediately preceding annual meeting, and (b) with respect to an election to be held at a special meeting of stockholders for the election of directors, the close of business on the tenth day following the date on which notice of such meeting is first given to stockholders. Each such notice shall set forth (i) the name and address of the stockholder who intends to make the nomination and of the person or persons to be nominated; (ii) a representation that the stockholder is a holder of record of stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice; (iii) a description of all arrangements or understandings between the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nomination or nominations are to be made by the stockholder; (iv) such other information regarding each nominee proposed by such stockholder as would be required to be included in a proxy statement filed pursuant to the proxy rules of the Securities and Exchange Commission; and (v) the consent of each nominee to serve as a director of the Corporation if so elected. The presiding officer of the meeting may refuse to acknowledge the nomination of any person not made in compliance with the foregoing procedure.

Section 3. Newly Created Directorships and Vacancies. Newly created directorships resulting from any increase in the number of directors and any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal, or other cause shall be filled only by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the Board of Directors. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred and until such director's successor shall have been elected and qualified. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

Section 4. Removal of Directors. Any director may be removed from office by stockholder vote at any time, but only for cause, by the affirmative vote of the holders of at least a majority of the voting power of the then outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class. Any director may also be removed from office for cause by vote of a majority of the directors then in office.

Section 5. Directors Elected by Holders of Preferred Stock. Whenever the holders of any class or series or Preferred Stock or of any other class or series of shares issued by the Corporation shall have the right, voting separately as a

class or series, to elect one or more directors under specified circumstances, the election, term of office, filling of vacancies, and other features of such directorships shall be governed by the terms of the Articles of Organization applicable thereto, and none of the provisions of Sections 1 to 4 of this Article II shall apply with respect to directors so elected.

Section 6. Resignations. Any director, member of a committee, or officer may resign at any time by delivering his resignation in writing to the Chairman of the Board, the President, the Clerk, or to a meeting of the Board of Directors. Such resignation shall be effective upon receipt unless specified to be effective at some other time.

Section 7. Powers. Except as reserved to the stockholders by law, by the Articles of Organization, or by these By-Laws, the business of the Corporation shall be managed by the Board of Directors who shall have and may exercise all the powers of the Corporation.

Section 8. [Intentionally Omitted]

Section 9. Other Committees. The Board of Directors may, by vote of a majority of the directors then in office, elect from their number other committees and may delegate to any such committee or committees some or all of the powers of the Board of Directors except those powers which by law, by the Articles of Organization, or by these By-Laws they are prohibited from delegating. Except as the Board of Directors may otherwise determine, each committee may make rules for the conduct of its business, but unless otherwise provided by the Board of Directors or such rules, its business shall be conducted as nearly as may be in the same manner as is provided by these By-Laws for the conduct of business by the Board of Directors. The Board of Directors shall have the power to rescind any vote, resolution, or other action of any committee, provided that the rights of third parties shall not be impaired by such rescission.

Section 10. Regular Meetings. A regular meeting of the Board of Directors shall be held without call or notice immediately after and at the same place as the annual meeting of the stockholders. Other regular meetings of the Board of Directors may be held without call or notice at such places and at such times as the Board of Directors may, from time to time, determine, provided that notice of the first regular meeting following any such determination shall be given to absent directors.

Section 11. Special Meetings. Special meetings of the Board of Directors may be held at any time and at any place designated in the call of the meeting, when called by the Chairman of the Board, the President, or by two or more directors.

Section 12. Notice of the Meetings. It shall be sufficient notice to a director of a meeting of the Board of Directors (i) to send notice by mail at least forty-eight (48) hours before the meeting, addressed to such directors at his usual or last known business or residence address, (ii) to send notice by electronic mail (to the electronic mail address designated by such director) at least twenty-four (24) hours before the meeting, or (iii) to give notice to such director in person or by telephone at least twenty-four (24) hours before the meeting. A director may waive any notice before or after the date and time of the meeting. The waiver shall be in writing, signed by the director entitled to the notice, or in the form of an electronic transmission by the director to a representative of the Corporation, and filed with the minutes or corporate records. A director's attendance at or participation in a meeting waives any required notice to him or her of the meeting unless the director at the beginning of the meeting, or promptly upon his or her arrival, objects to holding

the meeting or transacting business at the meeting and does not thereafter vote for or assent to action taken at the meeting. Neither notice of a meeting nor a waiver of a notice need specify the purposes of the meeting.

Section 13. Quorum of Directors. At any meeting of the Board of Directors, a majority of the directors then in office shall constitute a quorum. Any meeting may be adjourned from time to time by a majority of the votes cast upon the question, whether or not a quorum is present, and the meeting may be held as adjourned without further notice.

Section 14. Action by Vote. When a quorum is present at any meeting, a majority of the directors present may take any action, except when a larger vote is required by law, by the Articles of Organization, or by these By-Laws.

Section 15. Action by Written Consent. Unless the Articles of Organization otherwise provide, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting if all the directors or members of the committee as the case may be, consent to the action. The action must be evidenced by one or more consents describing the action taken, in writing, signed by each director or delivered to the Corporation by electronic transmission, and included in the minutes or filed with the corporate records reflecting the action taken. Such consents shall be treated for all purposes as a vote taken at a meeting.

Section 16. Participation Through Communications Equipment. Unless otherwise provided by law or the Articles of Organization, members of the Board of Directors or of any committee thereof may participate in a meeting of such Board or committee, as the case may be, through conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other at the same time, and participation by such means shall constitute presence in person at a meeting.

Section 17. Compensation of Directors. The Board of Directors may provide for the payment to any of the directors, other than officers or employees of the Corporation, of a specified amount for services as a director or member of a committee of the Board, or of a specified amount for attendance at each regular or special Board or committee meeting or of both, and all directors shall be reimbursed for expenses of attendance at any such meeting; provided, however, that nothing herein contained shall be construed to preclude any director from serving the Corporation in any other capacity and receiving compensation therefor.

ARTICLE III

OFFICERS AND AGENTS

Section 1. Enumeration; Qualification. The officers of the Corporation shall be a President, a Treasurer, a Secretary, who may also be referred to in these By-Laws as the Clerk, and such other officers, including, without limitation, a Chairman of the Board, one or more Vice Presidents, Assistant Treasurers, and Assistant Clerks as the Board of Directors from time to time may in their discretion elect or appoint. In addition, the Corporation shall have such other agents as may be appointed by management in accordance with these By-Laws. The Chairman of the Board shall be a director. The President need not be a director. Any two or more offices may be held by the same person.

Section 2. Powers. Subject to law, to the Articles of Organization, and to the other provisions of these By-Laws, each officer shall have, in addition to the duties and powers herein set forth, such duties and powers as are commonly incident to his office and such duties and powers as the Board of Directors may from time to time designate.

Section 3. Election. The Chairman of the Board, if any, the President, the Treasurer, and the Clerk shall be elected annually by the Board of Directors at their first meeting following the annual meeting of the stockholders. Other officers, if any, may be elected or appointed by the Board of Directors at said meeting or at any other time.

Section 4. Tenure. Except as otherwise provided by law, by the Articles of Organization, or by these By-Laws, the Chairman of the Board, if any, the President, the Treasurer, and the Clerk shall hold office until the first meeting of the Board of Directors following the next annual meeting of the stockholders and until their respective successors are chosen and qualified, and each other officer shall hold office for such term as may be designated in the vote electing or appointing him, or in each case until such officer sooner dies, resigns, is removed, or becomes disqualified.

Section 5. Chief Executive Officer. The Chief Executive Officer of the Corporation shall be the Chairman of the Board, the President, or such other officer as may from time to time be designated by the Board of Directors. If no such designation is made, the President shall be the Chief Executive Officer. The Chief Executive Officer shall, subject to the control of the Board of Directors, have general charge and supervision of the business of the Corporation and, except as the Board of Directors shall otherwise determine, shall preside at all meetings of the stockholders and of the Executive Committee. Unless otherwise determined by the Board of Directors, the Chief Executive Officer shall have the authority to appoint such agents, in addition to those officers enumerated in Section 2 of this Article III as being elected or appointed by the Board of Directors, as he shall deem appropriate and to define their respective duties and powers.

Section 6. Chairman of the Board. If a Chairman of the Board of Directors is elected, he shall preside at all meetings of the Board of Directors and shall have the duties and powers specified in these By-Laws and such other duties and powers as may be determined by the Board of Directors.

Section 7. President and Vice Presidents. The President shall have the duties and powers specified in these By-Laws and shall have such other duties and powers as may be determined by the Board of Directors.

The Vice Presidents shall have such duties and powers as shall be designated from time to time by the Board of Directors. Unless the Board of Directors otherwise determines, one Vice President shall be designated as the Chief Financial officer of the Corporation and, as such, shall be the chief financial and accounting officer of the Corporation and shall have the duties and powers commonly incident thereto.

Section 8. Treasurer and Assistant Treasurers. The Treasurer shall have general responsibility for the corporate treasury function, shall be in charge of its funds and valuable papers, books of account, and accounting records, and shall have such other duties and powers as may be designated from time to time by the Board of Directors.

Any Assistant Treasurer shall have such duties and powers as shall be designated from time to time by the Board of Directors or the Treasurer.

Section 9. Clerk and Assistant Clerks. The Clerk shall record all proceedings of the stockholders and Board of Directors in a book or series of books to be kept for that purpose, which book or books shall be kept as the principal office of the Corporation and shall be open at all reasonable times to the inspection of any stockholder. In the absence of the Clerk from any meeting of the stockholders or Board of Directors, an Assistant Clerk, or if there be none or he is absent, a temporary clerk chosen at the meeting, shall record the proceedings thereof in the aforesaid book.

Any Assistant Clerks shall have such other duties and powers as shall be designated from time by the Board of Directors or the Clerk.

ARTICLE IV

CAPITAL STOCK

Section 1. Stock Certificates. The Board of Directors may authorize the issue without certificates of some or all of the shares of any or all of the Corporation's classes or series of stock. Except to the extent the Board of Directors has determined to issue shares without certificates, a stockholder shall be entitled to a certificate stating the number and the class and the designation of the series, if any, of the shares held by him, in such form as shall, in conformity to law, be prescribed from time to time by the Board of Directors. Such certificate shall be signed by the President or a Vice President and by the Treasurer or an Assistant Treasurer. Such signatures may be facsimile if the certificate is signed by a transfer agent, or by a registrar, other than a director, officer, or employee of the Corporation. In case any officer who has signed or whose facsimile signature has been placed on such certificate shall have ceased to be such officer before such certificate is issued, it may be issued by the Corporation with the same effect as if he were such officer at the time of its issue.

Every certificate for shares of stock which are subject to any restriction on transfer pursuant to the Articles of Organization, these By-Laws, or any agreement to which the Corporation is a party shall have the existence of the restriction noted conspicuously on the certificate and shall also set forth on the face or back either a summary of the restriction or a statement of the existence of such restriction and a statement that the Corporation will, upon written request, furnish a copy thereof to the holder of such certificate without charge.

Every certificate issued when the Corporation is authorized to issue more that one class or series of stock shall set forth on its face or back either a summary of the preferences, voting powers, qualifications, and special and relative rights of the shares of each class and series authorized to be issued or a statement of the existence of such preferences, powers, qualifications, and rights and a statement that the Corporation will, upon written request, furnish a copy thereof to the holder of such certificate without charge.

Section 2. Lost Certificates. In the case of the alleged loss, destruction, or mutilation of a certificate of stock, a duplicate certificate may be issued in place thereof, upon such conditions as the Board of Directors may prescribe. When authorizing such issue of a new certificate, the Board may in its discretion require the owner of such lost, destroyed, or mutilated certificate, or his legal representative, to give the Corporation a bond, with or without surety, sufficient in the Board's opinion to indemnify the Corporation against any loss or claim that may be made against it with request to the certificate alleged to have been lost, destroyed, or mutilated.

Section 3. Transfer of Shares. Subject to the restrictions, if any, stated or noted on the stock certificates, shares of stock may be transferred on the books of the Corporation by the surrender to the Corporation or its transfer agent of the certificate therefor properly endorsed or accompanied by a written assignment and power of attorney properly executed with necessary transfer stamps affixed, and with such proof of the authenticity of signature as the Board of Directors or the transfer agent of the Corporation may reasonably require. Except as may be otherwise required by law, by the Articles of Organization, or by these By-Laws, the Corporation shall be entitled to treat the record holder of stock as shown on its on its books as the owner of such stock for all purposes, including the payment of dividends and the right to receive notice and to vote with respect thereto, regardless of any transfer, pledge, or other disposition of such stock, until the shares have been transferred on the books of the stock, until the shares have been transferred on the books of the Corporation in accordance with the requirements of these By-Laws.

Section 4. Record Date and Closing Transfer Books. The Board of Directors may fix in advance a time, which shall not be more than sixty (60) days before the date of any meeting of stockholders or the date for the payment of any dividend or making of any distribution to stockholders or the last day on which the consent or dissent of stockholders may be effectively expressed for any purpose, as the record date for determining the stockholders having the right to notice of and to vote at such meeting and any adjournment thereof or the right to receive such dividend or distribution or the right to give such consent or dissent, and in such case only stockholders of record on such record date shall have such right, notwithstanding any transfer of stock on the books of the Corporation after the record date; or without fixing such record date the Board of Directors may for any such purposes close the transfer books for all or any part of such period.

If no record date is fixed and the transfer books are not closed, the record date for determining stockholders having the right to notice of or to vote at a meeting of stockholders shall be at the close of business on the date next preceding the day on which notice is given, and the record date for determining stockholders for any other purpose shall be at the close of business on the date on which the Board of Directors acts with respect thereto.

ARTICLE V

INDEMNIFICATION

Section 1. Directors and Officers. The Corporation shall indemnify, and advance funds to pay for or reimburse the reasonable expenses incurred by, its directors and the officers that have been appointed by the Board of Directors (including persons who serve at its request as directors, officers, or trustees of another organization in which it has any interest, direct or indirect, as a shareholder, creditor, or otherwise or who serve at its request in any capacity with respect to any employee benefit plan) to the fullest extent permitted by law, and may indemnify, and advance funds to pay for or reimburse the reasonable expenses incurred by, such other employees and agents as are identified by the Board of Directors.

The right of indemnification hereby provided shall not be exclusive of or affect any other rights to which any director or officer may be entitled. As used in this section, the terms "director" and "officer" include their respective heirs, executors, and administrators, an "interested" director or officer is one against whom in such capacity the proceedings in question or another proceeding on the same or similar grounds is then pending or threatened, and a "disinterested" director is one against whom no such proceeding is then pending or threatened. Nothing contained in

this section shall affect any rights to indemnification to which corporate personnel other than directors and officers may be entitled by contract or otherwise under law.

The Board of Directors may authorize the purchase and maintenance of insurance, in such amounts as the Board of Directors may from time to time deem appropriate, on behalf of any person who is or was a director or officer or agent of the Corporation, or who is or was serving at the request of the Corporation as a director, officer, or agent of another organization in which it has any interest, direct or indirect, as a shareholder, creditor, or otherwise, or with respect to any employee benefit plan, against any liability incurred by him in any such capacity, or arising out of his status as such, whether or not such person is entitled to indemnification by the Corporation pursuant to this Article V or otherwise and whether or not the Corporation would have the power to indemnify him against such liability.

ARTICLE VI

MISCELLANEOUS

Section 1. Corporate Seal. The seal of the Corporation shall be in such form as the Board of Directors may from time to time determine.

Section 2. Fiscal Year. The fiscal year of the Corporation shall be such period as shall from time to time be determined by the Board of Directors.

Section 3. [Intentionally Omitted]

Section 4. Execution of Documents. Except as the Board of Directors may generally or in specific instances authorize the execution thereof in some other manner, all deeds, leases, transfers, contracts, checks, drafts, and other orders for the payment of money out of the funds of the Corporation, and all bonds, notes, debentures, guarantees, and other obligations or evidences or indebtedness of the Corporation shall be executed by the Chairman of the Board, the President, any Vice President, or the Treasurer.

Section 5. Voting of Securities. Except as the Board of Directors may generally or in specific instances direct otherwise, the Chairman of the Board, the President, any Vice President, or the Treasurer shall have the power, in the name and on behalf of the Corporation, to waive notice of, appoint any person or persons to act as proxy or attorney-in-fact of the Corporation (with or without power of substitution) to vote at, or attend and act for the Corporation at, any meeting of holders of shares or other securities of any other organization of which the Corporation holds shares or securities.

Section 6. Appointment of Auditor. The Board of Directors, or a committee thereof, shall each year select independent public accountants to report to the stockholders on the financial statements of the Corporation for such year. The selection of such accountants shall be presented to the stockholders for their approval at the annual meeting each year; provided, however, that if the shareholders shall not approve the selection made by the Board, the Board shall appoint other independent public accountants for such year.

ARTICLE VII

AMENDMENTS

Except as provided in the second paragraph of this Article VII, these By-Laws may be altered, amended, or repealed, and new By-Laws not inconsistent with any provision of the Articles of organization or applicable statute may be made either by the affirmative vote of a majority of the voting power of the then outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, at any annual or special meeting of the stockholders called for the purpose, or (except with respect to any provision hereof which by law, the Articles of Organization, or these By-Laws requires action by the stockholders) by the affirmative vote of a majority of the Board of Directors then in office. Not later that the time of giving notice of the meeting of stockholders next following the making, amending, or repealing by the Board of Directors of any By-Law, notice thereof stating the substance of such change shall be given to all stockholders entitled to vote on amending the By-Laws. Any By-Law made, amended, or repealed by the Board of Directors may be altered, amended, repealed, or reinstated by the stockholders.

Notwithstanding anything contained in these By-Laws to the contrary, the affirmative vote of the holders of 80% of the voting power of the then outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to alter, amend, adopt any provision inconsistent with, or repeal any provision of Section 1, 2, 3, or 4 of Article II of these By-Laws or this Article VII.

AMENDMENT
TO
AMENDED AND RESTATED
BY-LAWS OF VERTEX PHARMACEUTICALS INCORPORATED

A new Article II Section 8 is hereby inserted, as follows:

Section 8. Proxy Access for Director Nominations.

(a) Information to be Included in the Corporation's Proxy Materials. Whenever the Board of Directors solicits proxies with respect to the election of directors at an annual meeting of stockholders (following the 2016 annual meeting of stockholders), subject to the provisions of this Section 8, the Corporation shall include in its proxy statement for such annual meeting, in addition to any persons nominated for election by the Board of Directors or a committee appointed by the Board of Directors, the name, together with the Required Information (as defined below), of any person to be nominated for election to the Board of Directors by a stockholder pursuant to Section 2 of this Article II (a "Stockholder Nominee") if (i) the stockholder of record who intends to make the nomination qualifies as, or is acting on behalf of, an Eligible Stockholder (as defined in Section 8(c) of this Article II), (ii) the Eligible Stockholder expressly elects, in a written statement accompanying the notice required by Section 2 of this Article II (a "Nomination Notice"), to have its Stockholder Nominee included in the Corporation's proxy materials pursuant to this Section 8 and (iii) all of the other requirements set forth in this Section 8 and in Section 2 of this Article II are satisfied. For purposes of this Section 8, the "Required Information" that the Corporation will include in its proxy statement is (A) the information provided to the Clerk of the Corporation concerning the Stockholder Nominee and the Eligible Stockholder that is required to be disclosed in the Corporation's proxy statement pursuant to Section 14 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations promulgated thereunder, and (B) if the Eligible Stockholder so elects, a Supporting Statement (as defined in Section 8(g) of this Article II). For the avoidance of doubt, nothing in this Section 8 shall limit the Corporation's ability to solicit against any Stockholder Nominee or include in its proxy materials the Corporation's own statements or other information relating to any Eligible Stockholder or Stockholder Nominee, including any information provided to the Corporation pursuant to this Section 8. Subject to the provisions of this Section 8, the name of any Stockholder Nominee included in the Corporation's proxy statement for an annual meeting of stockholders shall also be set forth on the form of proxy distributed by the Corporation in connection with such annual meeting.

(b) Permitted Number of Stockholder Nominees. The maximum number of Stockholder Nominees that will be included in the Corporation's proxy materials with respect to an annual meeting of stockholders shall not exceed the greater of (i) two or (ii) 20% of the number of directors in office as of the last day on which a Nomination Notice may be delivered pursuant to Section 2 of this Article II (the "Final Proxy Access Date") or, if such amount is not a whole number, the closest whole number below 20% (such greater number, as it may be adjusted pursuant to this Section 8(b)), the "Permitted Number"). In the event that one or more vacancies for any reason occurs on the Board of Directors after the Final

Proxy Access Date but before the date of the annual meeting and the Board of Directors resolves to reduce the size of the Board of Directors in connection therewith, the Permitted Number shall be calculated based on the number of directors in office as so reduced. In addition, the Permitted Number shall be reduced by (i) the number of individuals who will be included in the Corporation's proxy materials as nominees recommended by the Board of Directors pursuant to an agreement, arrangement or other understanding with a stockholder or group of stockholders (other than any such agreement, arrangement or understanding entered into in connection with an acquisition of stock from the Corporation by such stockholder or group of stockholders), together with the number of directors in office as of the Final Proxy Access Date who were either elected by the Board of Directors to fill a vacancy pursuant to such an agreement, arrangement or other understanding, or included in the Corporation's proxy materials as nominees recommended by the Board of Directors pursuant to such an agreement, arrangement or other understanding for any of the two preceding annual meetings of stockholders, and whose remaining terms extend beyond the upcoming annual meeting, and (ii) the number of directors in office as of the Final Proxy Access Date who were included in the Corporation's proxy materials as Stockholder Nominees for any of the two preceding annual meetings of stockholders (including any persons counted as Stockholder Nominees pursuant to the immediately succeeding sentence) and whose remaining terms extend beyond the upcoming annual meeting. For purposes of determining when the Permitted Number has been reached, any individual requested by an Eligible Stockholder to be included in the Corporation's proxy materials pursuant to this Section 8 whose nomination is subsequently withdrawn or whom the Board of Directors decides to nominate for election to the Board of Directors shall be counted as one of the Stockholder Nominees. Any Eligible Stockholder requesting that more than one Stockholder Nominee be included in the Corporation's proxy materials pursuant to this Section 8 shall rank such Stockholder Nominees based on the order in which the Eligible Stockholder desires such Stockholder Nominees to be selected for inclusion in the Corporation's proxy materials in the event that the total number of Stockholder Nominees requested by Eligible Stockholders to be included in the Corporation's proxy materials pursuant to this Section 8 exceeds the Permitted Number. In the event that the number of Stockholder Nominees requested by Eligible Stockholders to be included in the Corporation's proxy materials pursuant to this Section 8 exceeds the Permitted Number, the highest ranking Stockholder Nominee who meets the requirements of this Section 8 from each Eligible Stockholder will be selected for inclusion in the Corporation's proxy materials until the Permitted Number is reached, going in order of the amount (largest to smallest) of shares of stock of the Corporation each Eligible Stockholder disclosed as owned in its Nomination Notice. If the Permitted Number is not reached after the highest ranking Stockholder Nominee who meets the requirements of this Section 8 from each Eligible Stockholder has been selected, then the next highest ranking Stockholder Nominee who meets the requirements of this Section 8 from each Eligible Stockholder will be selected for inclusion in the Corporation's proxy materials, and this process will continue as many times as necessary, following the same order each time, until the Permitted Number is reached. Notwithstanding anything to the contrary contained in this Section 8, the Corporation shall not be required to include any Stockholder Nominees in its proxy materials pursuant to this Section 8 for any meeting of stockholders for which the Corporation receives a Nomination Notice (whether or not subsequently withdrawn) and the stockholder by whom or on whose behalf the nomination is to be made does not expressly elect, in a written statement accompanying the

Nomination Notice, to have its Stockholder Nominee included in the Corporation's proxy materials pursuant to this Section 8.

(c) Eligible Stockholder. An "Eligible Stockholder" is a stockholder or a group of no more than 20 stockholders (counting as one stockholder, for this purpose, any two or more funds that are part of the same Qualifying Fund Group (as defined below)) that (i) has Owned (as defined in Section 8(d) of this Article II) continuously for at least three years (the "Minimum Holding Period") a number of shares of stock of the Corporation that represents at least three percent of the voting power of the outstanding shares of stock as of the date the Nomination Notice is delivered to or mailed and received by the Clerk of the Corporation in accordance with Section 2 of this Article II (the "Required Shares") and (ii) continues to Own the Required Shares through the date of the annual meeting. A "Qualifying Fund Group" is any two or more funds that are (A) under common management and investment control, (B) under common management and funded primarily by the same employer or (C) a "group of investment companies" as such term is defined in Section 12(d)(1)(G)(ii) of the Investment Company Act of 1940, as amended. Whenever the Eligible Stockholder consists of a group of stockholders (including a group of funds that are part of the same Qualifying Fund Group), (1) each provision in this Section 8 that requires the Eligible Stockholder to provide any written statements, representations, undertakings, agreements or other instruments or to meet any other conditions shall be deemed to require each stockholder (including each individual fund within a Qualifying Fund Group) that is a member of such group to provide such statements, representations, undertakings, agreements or other instruments and to meet such other conditions (except that the members of such group may aggregate the shares that each member has Owned continuously for the Minimum Holding Period in order to meet the three percent Ownership requirement of the "Required Shares" definition) and (2) a breach of any obligation, agreement or representation under this Section 8 by any member of such group shall be deemed a breach by the Eligible Stockholder. No person may be a member of more than one group of stockholders constituting an Eligible Stockholder with respect to any annual meeting.

(d) Definition of Ownership. For purposes of this Section 8, a stockholder shall be deemed to "Own" only those outstanding shares of stock of the Corporation as to which the stockholder possesses both (i) the full voting and investment rights pertaining to the shares and (ii) the full economic interest in (including the opportunity for profit from and risk of loss on) such shares; provided that the number of shares calculated in accordance with clauses (i) and (ii) shall not include any shares (A) sold by such stockholder or any of its affiliates in any transaction that has not been settled or closed, (B) borrowed by such stockholder or any of its affiliates for any purposes or purchased by such stockholder or any of its affiliates pursuant to an agreement to resell, or (C) subject to any option, warrant, forward contract, swap, contract of sale, or other derivative or similar instrument or agreement entered into by such stockholder or any of its affiliates, whether any such instrument or agreement is to be settled with shares or with cash based on the notional amount or value of shares of outstanding capital stock of the Corporation, in any such case which instrument or agreement has, or is intended to have, the purpose or effect of (1) reducing in any manner, to any extent or at any time in the future, such stockholder's or its affiliates' full right to vote or direct the voting of any such shares or (2) hedging, offsetting or altering to any degree any gain or

loss realized or realizable from maintaining the full economic ownership of such shares by such stockholder or affiliate. For purposes of this Section 8, a beneficial owner shall be considered a "stockholder" and shall "Own" shares held in the name of a nominee or other intermediary so long as such person retains the right to instruct how the shares are voted with respect to the election of directors and possesses the full economic interest in the shares. A stockholder's Ownership of shares shall be deemed to continue during any period in which (i) the stockholder has loaned such shares, provided that the stockholder has the power to recall such loaned shares on five business days' notice and includes with its Nomination Notice an agreement that it (A) will promptly recall such loaned shares upon being notified that any of its Stockholder Nominees will be included in the Corporation's proxy materials and (B) will continue to hold such shares through the date of the annual meeting, or (ii) the stockholder has delegated any voting power by means of a proxy, power of attorney or other instrument or arrangement that is revocable at any time by the stockholder. The terms "Owned," "Owning" and other variations of the word "Own" shall have correlative meanings. Whether outstanding shares of stock of the Corporation are "Owned" for these purposes shall be determined by the Board of Directors. For purposes of this Section 8, the term "affiliate" or "affiliates" shall have the meaning ascribed thereto under the General Rules and Regulations under the Exchange Act.

(e) Information to be Included with a Nomination Notice. In addition to containing the information, representations and other documents required to be set forth in a Nomination Notice pursuant to Section 2 of this Article II, in order for a Stockholder Nominee to be eligible for inclusion in the Corporation's proxy materials pursuant to this Section 8, the Nomination Notice must also set forth or be accompanied by the following:

(i) A written statement by the Eligible Stockholder setting forth and certifying as to the number of shares of stock it Owns and has Owned continuously for the Minimum Holding Period;

(ii) one or more written statements from the record holder of the Required Shares (and from each intermediary through which the Required Shares are or have been held during the Minimum Holding Period) verifying that, as of a date within seven calendar days prior to the date the Nomination Notice is delivered to or mailed and received by the Clerk of the Corporation in accordance with Section 2 of this Article II, the Eligible Stockholder Owns, and has Owned continuously for the Minimum Holding Period, the Required Shares, and the Eligible Stockholder's agreement to provide, within five business days following the later of the record date for the determination of stockholders certified to vote at the annual meeting and the date notice of the record date is first publicly disclosed, one or more written statements from the record holder and such intermediaries verifying the Eligible Stockholder's continuous Ownership of the Required Shares through the record date;

(iii) a copy of the Schedule 14N that has been or is concurrently being filed with the Securities and Exchange Commission as required by Rule 14a-18 under the Exchange Act;

(iv) a representation and agreement that the Eligible Stockholder (A) will continue to hold the Required Shares through the date of the annual meeting, (B) acquired the Required Shares in the ordinary course of business and not with the intent to change or influence control of the Corporation, and does not presently have such intent, (C) has not nominated and will not nominate for election to the Board of Directors at the annual meeting any person whom it has not requested be included in the Corporation's proxy materials pursuant to this Section 8, (D) has not engaged and will not engage in, and has not and will not be a "participant" in another person's, "solicitation" within the meaning of Rule 14a-1(l) under the Exchange Act in support of the election of any individual as a director at the annual meeting other than its Stockholder Nominee(s) or a nominee of the Board of Directors, (E) has not distributed and will not distribute to any stockholder of the Corporation any form of proxy for the annual meeting other than the form distributed by the Corporation, (F) has complied and will comply with all laws and regulations applicable to solicitations and the use, if any, of soliciting material in connection with the annual meeting and (G) has provided and will provide facts, statements and other information in all communications with the Corporation and its stockholders that are or will be true and correct in all material respects and do not and will not omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading;

(v) an undertaking that the Eligible Stockholder agrees to (A) assume all liability stemming from any legal or regulatory violation arising out of the Eligible Stockholder's communications with the stockholders of the Corporation or out of the information provided to the Corporation by or on behalf of the Eligible Stockholder, (B) indemnify and hold harmless the Corporation and each of its directors, officers and employees individually against any liability, loss or damages in connection with any threatened or pending action, suit or proceeding, whether legal, administrative or investigative, against the Corporation or any of its directors, officers or employees arising out of any nomination of any person for election to the Board of Directors submitted by or on behalf of the Eligible Stockholder or any solicitation or other activity in connection therewith, and (C) file with the Securities and Exchange Commission any solicitation or other communication with the stockholders of the Corporation relating to the meeting at which its Stockholder Nominee(s) will be nominated, regardless of whether any such filing is required under Regulation 14A of the Exchange Act or whether any exemption from filing is available for such solicitation or other communication under Regulation 14A of the Exchange Act;

(vi) a written representation and agreement from each Stockholder Nominee that such Stockholder Nominee (A) is not and will not become a party to (1) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such Stockholder Nominee, if elected as a director of the Corporation, will act or vote on any issue or question (a "Voting Commitment") that has not been disclosed to the Corporation in such representation and agreement or (2) any Voting Commitment that could limit or interfere with such person's ability to comply, if elected as a director of the Corporation, with such person's fiduciary duties under applicable law, (B) is not and will not become a party to any agreement, arrangement or understanding with any person or entity other than the Corporation with respect to any direct or indirect compensation,

reimbursement or indemnification in connection with such person's nomination or service or action as a director that has not been disclosed to the Corporation in such representation and agreement, (C) would be in compliance, if elected as a director of the Corporation, and will comply with the Corporation's code of business conduct and ethics, corporate governance guidelines, stock ownership and trading policies and guidelines and any other policies or guidelines of the Corporation applicable to directors and (D) will make such other acknowledgments, enter into such agreements and provide such information as the Board of Directors requires of all directors, including promptly submitting all completed and signed questionnaires required of the Corporation's directors;

(vii) if the Eligible Stockholder consists of a group of stockholders, the designation by all group members of one member of the group that is authorized to receive communications, notices and inquiries from the Corporation and to act on behalf of all members of the group with respect to all matters relating to the request under this Section 8 (including withdrawal of the nomination); and

(viii) if two or more funds that are part of the same Qualifying Fund Group are intended to be counted as one stockholder for purposes of qualifying as an Eligible Stockholder, documentation reasonably satisfactory to the Corporation that demonstrates that the funds are part of the same Qualifying Fund Group.

(f) Additional Required Information. In addition to the information required pursuant to Section 8(e) of this Article II or any other provision of these By-Laws, the Corporation may require (i) any proposed Stockholder Nominee requested to be included in the Corporation's proxy materials to furnish any other information (A) that may reasonably be requested by the Corporation to determine whether the Stockholder Nominee would be independent under the Independence Standards (as defined in Section 8(i) of this Article II), (B) that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such Stockholder Nominee or (C) that may reasonably be requested by the Corporation to determine the eligibility of such Stockholder Nominee to be included in the Corporation's proxy materials pursuant to this Section 8 or to serve as a director of the Corporation, and (ii) any Eligible Stockholder to furnish any other information that may reasonably be requested by the Corporation to verify the Eligible Stockholder's continuous ownership of the Required Shares for the Minimum Holding Period and through the date of the annual meeting.

(g) Supporting Statement. The Eligible Stockholder may, at its option, provide to the Clerk of the Corporation, at the time the Nomination Notice is provided, a written statement, not to exceed 500 words, in support of its Stockholder Nominee(s)' candidacy (a "Supporting Statement"). Only one Supporting Statement may be submitted by an Eligible Stockholder (including any group of stockholders together constituting an Eligible Stockholder) in support of its Stockholder Nominee(s). Notwithstanding anything to the contrary contained in this Section 8, the Corporation may omit from its proxy materials any information or Supporting Statement (or portion thereof) that it, in good faith, believes would violate any applicable law, rule or regulation.

(h) Correction of Defects; Updates and Supplements. In the event that any information or communications provided by or on behalf of an Eligible Stockholder or a Stockholder Nominee to the Corporation or its stockholders ceases to be true and correct in all material respects or omits to state a material fact necessary to make the statements made, in light of the circumstances under which they were made, not misleading, such Eligible Stockholder or Stockholder Nominee, as the case may be, shall promptly notify the Clerk of the Corporation of any such defect and of the information that is required to correct any such defect. Without limiting the forgoing, an Eligible Stockholder must provide immediate notice to the Corporation if the Eligible Stockholder ceases to Own any of the Required Shares prior to the date of the annual meeting. For the avoidance of doubt, no notification, update or supplement provided pursuant to this Section 8(h) shall be deemed to cure any defect in any previously provided information or communications or limit the remedies available to the Corporation relating to any such defect (including the right to omit a Stockholder Nominee from its proxy materials pursuant to this Section 8).

(i) Stockholder Nominee Eligibility. Notwithstanding anything to the contrary contained in this Section 8, the Corporation shall not be required to include in its proxy materials, pursuant to this Section 8, a Stockholder Nominee (i) who would not be an independent director under the rules and listing standards of the United States securities exchanges upon which the capital stock of the Corporation is listed or traded, any applicable rules of the Securities and Exchange Commission, or any publicly disclosed standards used by the Board of Directors in determining and disclosing the independence of the Corporation's directors (collectively, the "Independence Standards"), (ii) whose election as a member of the Board of Directors would cause the Corporation to be in violation of these By-Laws, the Articles of Organization, the rules and listing standards of the United States securities exchanges upon which the capital stock of the Corporation is listed or traded, or any applicable law, rule or regulation, (iii) who is or has been, within the past three years, an officer or director of a competitor, as defined in Section 8 of the Clayton Antitrust Act of 1914, (iv) who is a named subject of a pending criminal proceeding (excluding traffic violations and other minor offenses) or has been convicted in such a criminal proceeding within the past 10 years, (v) who is subject to any order of the type specified in Rule 506(d) of Regulation D promulgated under the Securities Act of 1933, as amended, or (vi) who shall have provided any information to the Corporation or its stockholders that was untrue in any material respect or that omitted to state a material fact necessary to make the statements made, in light of the circumstances in which they were made, not misleading.

(j) Omission and Removal of Stockholder Nominees. Notwithstanding anything to the contrary set forth herein, if (i) a Stockholder Nominee and/or the applicable Eligible Stockholder breaches any of its representations, agreements or undertakings or fails to comply with any of its obligations under this Section 8 or Section 2 of this Article II, or (ii) a Stockholder Nominee otherwise becomes ineligible for inclusion in the Corporation's proxy materials pursuant to this Section 8 or dies, becomes disabled or otherwise becomes ineligible or unavailable for election at the annual meeting, in each case as determined by the Board of Directors or the presiding officer of the annual meeting, then (A) the Corporation may omit or, to the extent feasible, remove the information concerning such Stockholder Nominee and the related Supporting Statement from its proxy materials and otherwise communicate to its stockholders that

such Stockholder Nominee will not be eligible for election at the annual meeting and, (B) the Corporation shall not be required to include in its proxy materials any successor or replacement nominee proposed by the applicable Eligible Stockholder or any other Eligible Stockholder.

(k) Restrictions on Re-Nominations. Any Stockholder Nominee who is included in the Corporation's proxy materials for a particular annual meeting of stockholders but either (i) withdraws from or becomes ineligible or unavailable for election at the annual meeting, or (ii) does not receive at least 10% of the votes cast in favor of such Stockholder Nominee's election, will be ineligible to be included in the Corporation's proxy materials pursuant to this Section 8 for the next two annual meetings of stockholders.

(l) General. This Section 8 provides the exclusive method for a stockholder to include nominees for election to the Board of Directors in the Corporation's proxy materials.

Exhibit 31.1

CERTIFICATION

I, Jeffrey M. Leiden, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Vertex Pharmaceuticals Incorporated;

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 (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

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

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

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

Date: May 3, 2016

/s/ Jeffrey M. Leiden

Jeffrey M. Leiden
Chief Executive Officer and President

Exhibit 31.2

CERTIFICATION

I, Ian F. Smith, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Vertex Pharmaceuticals Incorporated;

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 (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

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

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

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

Date: May 3, 2016

/s/ Ian F. Smith

Ian F. Smith
Executive Vice President and Chief Financial Officer

Exhibit 32.1

SECTION 906 CEO/CFO CERTIFICATION

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) each of the undersigned officers of Vertex Pharmaceuticals Incorporated, a Massachusetts corporation (the "Company"), does hereby certify, to such officer's knowledge, that the Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (the "Form 10-Q") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 3, 2016

/s/ Jeffrey M. Leiden

Jeffrey M. Leiden
Chief Executive Officer and President

Date: May 3, 2016

/s/ Ian F. Smith

Ian F. Smith
Executive Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.