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 JUNE 30, 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	**247,778,698**
Class	Outstanding at July 22, 2016

VERTEX PHARMACEUTICALS INCORPORATED
FORM 10-Q
FOR THE QUARTER ENDED JUNE 30, 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 June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Revenues:				
Product revenues, net	$ 425,651	$ 160,388	$ 820,061	$ 291,263
Royalty revenues	5,282	5,077	8,878	11,869
Collaborative revenues	675	611	749	1,453
Total revenues	431,608	166,076	829,688	304,585
Costs and expenses:				
Cost of product revenues	44,154	15,409	93,943	24,790
Royalty expenses	1,098	1,451	1,958	4,377
Research and development expenses	271,008	223,858	526,868	439,457
Sales, general and administrative expenses	111,652	94,394	216,866	180,254
Restructuring expenses (income), net	343	2,128	1,030	(1,144)
Total costs and expenses	428,255	337,240	840,665	647,734
Income (loss) from operations	3,353	(171,164)	(10,977)	(343,149)
Interest expense, net	(20,155)	(21,111)	(40,853)	(42,418)
Other (expenses) income, net	(1,219)	1,414	3,192	(3,699)
Loss before provision for income taxes	(18,021)	(190,861)	(48,638)	(389,266)
Provision for income taxes	18,130	30,131	23,615	30,430
Net loss	(36,151)	(220,992)	(72,253)	(419,696)
(Income) loss attributable to noncontrolling interest	(28,374)	32,144	(33,903)	32,242
Net loss attributable to Vertex	$ (64,525)	$ (188,848)	$ (106,156)	$ (387,454)
Amounts per share attributable to Vertex common shareholders:				
Net loss:				
Basic	$ (0.26)	$ (0.78)	$ (0.43)	$ (1.61)
Diluted	$ (0.26)	$ (0.78)	$ (0.43)	$ (1.61)
Shares used in per share calculations:				
Basic	244,482	240,757	244,124	240,129
Diluted	244,482	240,757	244,124	240,129

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 June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Net loss	$ (36,151)	$ (220,992)	$ (72,253)	$ (419,696)
Changes in other comprehensive loss:				
Unrealized holding gains (losses) on marketable securities	(29)	(46)	200	130
Unrealized gains (losses) on foreign currency forward contracts, net of tax	4,999	(4,280)	(213)	(3,974)
Foreign currency translation adjustment	(3,461)	1,828	(5,201)	1,220
Total changes in other comprehensive loss	1,509	(2,498)	(5,214)	(2,624)
Comprehensive loss	(34,642)	(223,490)	(77,467)	(422,320)
Comprehensive (income) loss attributable to noncontrolling interest	(28,374)	32,144	(33,903)	32,242
Comprehensive loss attributable to Vertex	$ (63,016)	$ (191,346)	$ (111,370)	$ (390,078)

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)

	June 30, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	$ 605,866	$ 714,768
Marketable securities, available for sale	465,570	327,694
Restricted cash and cash equivalents (VIE)	70,513	78,910
Accounts receivable, net	189,356	177,639
Inventories	66,589	57,207
Prepaid expenses and other current assets	56,256	50,935
Total current assets	1,454,150	1,407,153
Property and equipment, net	690,607	697,715
Intangible assets	284,340	284,340
Goodwill	50,384	50,384
Cost method investment in CRISPR	33,213	—
Notes receivable	—	30,000
Restricted cash	22,085	22,083
Other assets	14,203	6,912
Total assets	$ 2,548,982	$ 2,498,587
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	$ 51,302	$ 74,942
Accrued expenses	275,165	305,820
Deferred revenues, current portion	11,468	16,296
Accrued restructuring expenses, current portion	7,683	7,894
Capital lease obligations, current portion	17,446	15,545
Senior secured term loan, current portion	221,576	71,296
Other liabilities, current portion	38,215	14,374
Total current liabilities	622,855	506,167
Deferred revenues, excluding current portion	7,411	9,714
Accrued restructuring expenses, excluding current portion	4,801	7,464
Capital lease obligations, excluding current portion	34,317	42,923
Deferred tax liability	132,810	110,439
Construction financing lease obligation, excluding current portion	472,374	472,611
Senior secured term loan, net of current portion and discount	74,921	223,863
Other liabilities, excluding current portion	30,648	31,778
Total liabilities	1,380,137	1,404,959
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, $0.01 par value; 1,000,000 shares authorized; none issued and outstanding at June 30, 2016 and December 31, 2015	—	—
Common stock, $0.01 par value; 500,000,000 and 500,000,000 shares authorized at June 30, 2016 and December 31, 2015, respectively; 247,703,932 and 246,306,818 shares issued and outstanding at June 30, 2016 and December 31, 2015, respectively	2,440	2,427
Additional paid-in capital	6,350,244	6,197,500
Accumulated other comprehensive (loss) income	(3,390)	1,824
Accumulated deficit	(5,367,940)	(5,261,784)
Total Vertex shareholders' equity	981,354	939,967
Noncontrolling interest	187,491	153,661
Total shareholders' equity	1,168,845	1,093,628
Total liabilities and shareholders' equity	$ 2,548,982	$ 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	—	—	—	(2,624)	—	(2,624)	—	(2,624)
Net loss	—	—	—	—	(387,454)	(387,454)	(32,242)	(419,696)
Issuance of common stock under benefit plans	2,578	21	87,333	—	—	87,354	—	87,354
Stock-based compensation expense	—	—	122,682	—	—	122,682	—	122,682
Noncontrolling interest upon consolidation	—	$ —	$ —	$ —	$ —	$ —	$ 164,317	$ 164,317
Balance at June 30, 2015	244,342	$ 2,406	$ 5,987,169	$ (1,707)	$ (5,092,904)	$ 894,964	$ 153,252	$ 1,048,216
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	—	—	—	(5,214)	—	(5,214)	—	(5,214)
Net (loss) income	—	—	—	—	(106,156)	(106,156)	33,903	(72,253)
Issuance of common stock under benefit plans	1,397	13	33,557	—	—	33,570	—	33,570
Stock-based compensation expense	—	—	119,187	—	—	119,187	(73)	119,114
Balance at June 30, 2016	247,704	$ 2,440	$ 6,350,244	$ (3,390)	$ (5,367,940)	$ 981,354	$ 187,491	$ 1,168,845

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)

	Six Months Ended June 30,	
	2016	**2015**
Cash flows from operating activities:		
Net loss	$ (72,253)	$ (419,696)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	117,414	120,645
Depreciation and amortization expense	31,378	30,428
Deferred income taxes	22,858	6,346
Other non-cash items, net	3,436	6,045
Changes in operating assets and liabilities:		
Accounts receivable, net	(12,954)	(21,197)
Inventories	(7,779)	(9,426)
Prepaid expenses and other assets	(7,971)	(15,397)
Accounts payable	(23,821)	(3,033)
Accrued expenses and other liabilities	(14,562)	8,098
Accrued restructuring expense	(2,892)	(26,012)
Deferred revenues	(7,131)	(9,303)
Net cash provided by (used in) operating activities	25,723	(332,502)
Cash flows from investing activities:		
Purchases of marketable securities	(470,077)	(125,655)
Maturities of marketable securities	332,316	741,725
Payment for acquisition of variable interest entity	—	(80,000)
Expenditures for property and equipment	(27,892)	(23,978)
Increase in restricted cash and cash equivalents	—	(21,975)
Investment in CRISPR Series B preferred stock	(3,075)	—
Decrease in restricted cash and cash equivalents (VIE)	8,397	2,277
(Increase) decrease in other assets	(159)	87
Net cash (used in) provided by investing activities	(160,490)	492,481
Cash flows from financing activities:		
Issuances of common stock under benefit plans	33,702	87,850
Payments on capital lease obligations	(7,538)	(14,441)
Proceeds from capital lease financing	—	13,386
Payments on construction financing lease obligation	(209)	(184)
Net cash provided by financing activities	25,955	86,611
Effect of changes in exchange rates on cash	(90)	(1,306)
Net (decrease) increase in cash and cash equivalents	(108,902)	245,284
Cash and cash equivalents—beginning of period	714,768	625,259
Cash and cash equivalents—end of period	$ 605,866	$ 870,543
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 41,325	$ 42,885
Cash paid for income taxes	$ 1,237	$ 1,022
Issuances of common stock exercises from employee benefit plans receivable	$ 161	$ 166

The Company has reclassified certain amounts in the period ending June 30, 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 June 30, 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 six months ended June 30, 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 six months ended June 30, 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	9,935	65,066	1,288	4,220	80,509
Adjustments related to prior period sales	(77)	(1,712)	(205)	5	(1,989)
Credits/payments made	(9,762)	(44,113)	(260)	(4,638)	(58,773)
Balance at June 30, 2016	$ 2,185	$ 63,910	$ 2,051	$ 897	$ 69,043

In the three and six months ended June 30, 2016, the Company sold ORKAMBI in France pursuant to early access programs. The Company has not recognized any product revenues based on these sales because the price is not fixed or determinable due to the ongoing negotiations regarding the reimbursement rate for ORKAMBI in France. If the negotiated reimbursement rate in France is lower than the price currently being paid by Customers in France under these programs, the Company would reimburse the difference between such prices to the Customers. The cash received from sales in France is included as a liability on the Company's condensed consolidated balance sheet, and the increase in "other liabilities, current portion" from December 31, 2015 to June 30, 2016 is primarily due to this liability.

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.

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(unaudited)

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 and six months ended June 30, 2016 and 2015.

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. In the second quarter of 2016, the Company made an additional preferred stock investment in CRISPR of approximately $3.1 million.

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.

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

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

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 timing of achieving the milestones, 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.

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 measurement period for purchase accounting was closed during the quarter. There were no purchase accounting adjustments recorded during the measurement period.

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Notes to Condensed Consolidated Financial Statements
(unaudited)

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 and six months ended June 30, 2016 and 2015 is as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(in thousands)			
Loss attributable to noncontrolling interest before provision for income taxes	$ 2,835	$ 1,293	$ 3,674	$ 1,579
Provision for income taxes	17,511	29,653	20,573	29,590
(Increase) decrease in fair value of contingent milestone and royalty payments	(48,720)	1,198	(58,150)	1,073
Net (income) loss attributable to noncontrolling interest	$ (28,374)	$ 32,144	$ (33,903)	$ 32,242

The increases in the fair value of the contingent milestone and royalty payments in the three and six months ended June 30, 2016 were primarily due to a Phase 2 clinical trial of VX-371, a compound being developed pursuant to the Parion Agreement, achieving its primary safety endpoint in the second quarter of 2016. The fair value of the contingent milestone and royalty payments also reflects changes in market interest rates and the time value of money. During the three and six months ended June 30, 2016 and 2015, the increase (decrease) in the fair value of the contingent milestone and royalty payments related to the Company's VIEs was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(in thousands)			
Parion	$ 48,400	$ (1,621)	$ 57,400	$ (1,621)
BioAxone	320	423	750	548

As of June 30, 2016, the fair value of the contingent milestone and royalty payments related to the Parion Agreement and the BioAxone Agreement was $231.4 million and $28.7 million, respectively. As of December 31, 2015, the fair value of the contingent milestone and royalty payments related to the Parion collaboration and the BioAxone collaboration was $179.0 million and $28.0 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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	June 30, 2016	December 31, 2015
	(in thousands)	
Restricted cash and cash equivalents (VIE)	$ 70,513	$ 78,910
Prepaid expenses and other current assets	3,001	3,138
Intangible assets	284,340	284,340
Goodwill	19,391	19,391
Other assets	383	455
Accounts payable	1,129	676
Taxes payable	11,723	24,554
Other current liabilities	7,059	7,100
Deferred tax liability, net	132,810	110,438
Other liabilities	310	300
Noncontrolling interest	187,491	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. may terminate the Janssen Influenza Agreement, subject to certain exceptions, upon six months' notice.

Janssen Inc. is responsible for costs related to the development and commercialization of the compounds. During the three and six months ended June 30, 2016, the Company recorded reimbursement for these development activities of $4.3 million and $7.8 million, respectively. During the three and six months ended June 30, 2015, the Company recorded reimbursement for these development activities of $7.1 million and $14.7 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.

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Subsequent Event

Moderna Therapeutics, Inc.

In July 2016, the Company entered into a strategic collaboration and licensing agreement (the "Moderna Agreement") with Moderna Therapeutics, Inc. ("Moderna") pursuant to which the parties are seeking to identify and develop messenger Ribonucleic Acid ("mRNA") Therapeutics™ for the treatment of CF. In connection with the Moderna Agreement in the third quarter of 2016, the Company made an upfront payment to Moderna of $20.0 million and made a $20.0 million investment in Moderna pursuant to a convertible promissory note. Moderna has the potential to receive future development and regulatory milestones of up to $275.0 million, including $220.0 million in approval and reimbursement milestones, as well as tiered royalty payments on future sales.

Under the terms of the collaboration, Moderna will lead discovery efforts and the Company will lead all preclinical, development and commercialization activities associated with the advancement of mRNA Therapeutics that result from this collaboration and will fund all expenses related to the collaboration.

The Company may terminate the Moderna Agreement by providing advanced notice to Moderna, with the required length of notice dependent on whether any product developed under the Moderna Agreement has received marketing approval. The Moderna 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 Moderna Agreement will continue in effect until the expiration of the Company's payment obligations under the Moderna Agreement.

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 June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(in thousands)			
Stock options	12,231	11,933	12,231	11,933
Unvested restricted stock and restricted stock units	3,506	3,355	3,506	3,355

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:

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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 June 30, 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 June 30, 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.

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 June 30, 2016			
		Fair Value Hierarchy		
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Financial assets carried at fair value:				
Cash equivalents:				
Money market funds	$ 110,696	$ 110,696	$ —	$ —
Marketable securities:				
U.S. Treasury securities	33,142	33,142	—	—
Government-sponsored enterprise securities	131,900	131,900	—	—
Corporate debt securities	135,675	—	135,675	—
Commercial paper	164,853	—	164,853	—
Prepaid and other current assets:				
Foreign currency forward contracts	9,966	—	9,966	—
Other assets:				
Foreign currency forward contracts	1,604	—	1,604	—
Total financial assets	$ 587,836	$ 275,738	$ 312,098	$ —
Financial liabilities carried at fair value:				
Other liabilities, current portion:				
Foreign currency forward contracts	$ (7,317)	$ —	$ (7,317)	$ —
Other liabilities, excluding current portion:				
Foreign currency forward contracts	(88)	—	(88)	—
Total financial liabilities	$ (7,405)	$ —	$ (7,405)	$ —

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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	99,123	—	99,123	—
Corporate debt securities	141,409	—	141,409	—
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 $70.2 million as of June 30, 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 June 30, 2016, the fair value and carrying value of the Company's Term Loan was $296.5 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 June 30, 2016				
Cash and cash equivalents:				
Cash and money market funds	$ 605,866	$ —	$ —	$ 605,866
Total cash and cash equivalents	$ 605,866	$ —	$ —	$ 605,866
Marketable securities:				
U.S. Treasury securities (due within 1 year)	$ 33,138	$ 4	$ —	$ 33,142
Government-sponsored enterprise securities (due within 1 year)	131,868	35	(3)	131,900
Commercial paper (due within 1 year)	164,575	278	—	164,853
Corporate debt securities (due within 1 year)	135,663	34	(22)	135,675
Total marketable securities	$ 465,244	$ 351	$ (25)	$ 465,570
Total cash, cash equivalents and marketable securities	$ 1,071,110	$ 351	$ (25)	$ 1,071,436
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 June 30, 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 and six months ended June 30, 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 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	(5,201)	200	1,847	(3,154)
Amounts reclassified from accumulated other comprehensive loss	—	—	(2,060)	(2,060)
Net current period other comprehensive (loss) income	$ (5,201)	$ 200	$ (213)	$ (5,214)
Balance at June 30, 2016	$ (7,281)	$ 326	$ 3,565	$ (3,390)

	Foreign Currency Translation Adjustment	Unrealized Holding (Losses) Gains on Marketable Securities	Unrealized Gains (Losses) on Foreign Currency Forward Contracts	Total
		(in thousands)		
Balance at December 31, 2014	$ (971)	$ (123)	$ 2,011	$ 917
Other comprehensive (loss) income before reclassifications	1,220	130	(1,370)	(20)
Amounts reclassified from accumulated other comprehensive loss	—	—	(2,604)	(2,604)
Net current period other comprehensive (loss) income	$ 1,220	$ 130	$ (3,974)	$ (2,624)
Balance at June 30, 2015	$ 249	$ 7	$ (1,963)	$ (1,707)

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 June 30, 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 June 30, 2016	As of December 31, 2015
	(in thousands)	
Euro	$ 193,542	$ 103,362
British pound sterling	79,845	78,756
Australian dollar	28,318	27,167
Total foreign currency forward contracts	$ 301,705	$ 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 June 30, 2016			
Assets		**Liabilities**	
Classification	**Fair Value**	**Classification**	**Fair Value**
	(in thousands)		
Prepaid and other current assets	$ 9,966	Other liabilities, current portion	$ (7,317)
Other assets	1,604	Other liabilities, excluding current portion	(88)
Total assets	$ 11,570	Total liabilities	$ (7,405)

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 June 30, 2016				
	Gross Amounts Recognized	Gross Amounts Offset	Gross Amounts Presented	Gross Amounts Not Offset	Legal Offset
Foreign currency forward contracts	(in thousands)				
Total assets	$ 11,570	$ —	$ 11,570	$ (7,405)	$ 4,165
Total liabilities	$ (7,405)	$ —	$ (7,405)	$ 7,405	$ —

	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 June 30, 2016	As of December 31, 2015
	(in thousands)	
Raw materials	$ 5,408	$ 8,696
Work-in-process	45,807	40,695
Finished goods	15,374	7,816
Total	$ 66,589	$ 57,207

J. Intangible Assets and Goodwill

Intangible Assets

As of June 30, 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.

Goodwill

As of June 30, 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 $495.7 million and $502.3 million as of June 30, 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 $472.8 million and $473.0 million as of June 30, 2016 and December 31, 2015, respectively.

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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 bears 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 June 30, 2016.

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 June 30, 2016 and December 31, 2015, the unamortized discount associated

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with the Term Loan that was included in the senior secured term loan caption on the Company's condensed consolidated balance sheet was $3.4 million and $4.6 million, respectively.

L. Stock-based Compensation Expense

During the three and six months ended June 30, 2016 and 2015, the Company recognized the following stock-based compensation expense:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(in thousands)			
Stock-based compensation expense by type of award:				
Stock options	$ 31,826	$ 37,687	$ 58,086	$ 66,646
Restricted stock and restricted stock units	29,608	24,902	57,141	52,071
ESPP share issuances	1,436	1,825	3,960	3,965
Less stock-based compensation expense capitalized to inventories	(928)	(1,153)	(1,773)	(2,037)
Total stock-based compensation included in costs and expenses	$ 61,942	$ 63,261	$ 117,414	$ 120,645
Stock-based compensation expense by line item:				
Research and development expenses	$ 40,640	$ 41,632	$ 75,088	$ 79,849
Sales, general and administrative expenses	21,302	21,629	42,326	40,796
Total stock-based compensation included in costs and expenses	$ 61,942	$ 63,261	$ 117,414	$ 120,645

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 June 30, 2016	
	Unrecognized Expense, Net of Estimated Forfeitures	Weighted-average Recognition Period
	(in thousands)	(in years)
Type of award:		
Stock options	$ 176,251	2.66
Restricted stock and restricted stock units	$ 201,858	2.57
ESPP share issuances	$ 5,546	0.64

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The following table summarizes information about stock options outstanding and exercisable at June 30, 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	137	1.61	$ 18.93	137	$ 18.93
$20.01–$40.00	1,964	3.45	$ 34.24	1,962	$ 34.23
$40.01–$60.00	2,066	6.07	$ 48.14	1,657	$ 48.66
$60.01–$80.00	1,368	7.62	$ 75.90	734	$ 75.39
$80.01–$100.00	3,555	8.60	$ 90.68	1,080	$ 88.91
$100.01–$120.00	1,644	8.57	$ 109.32	500	$ 109.27
$120.01–$134.69	1,497	9.05	$ 130.61	420	$ 129.84
Total	12,231	7.21	$ 79.37	6,490	$ 63.32

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 June 30, 2016, the Company had $18.9 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 and six months ended June 30, 2016, the Company recorded a provision for income taxes of $18.1 million and $23.6 million, respectively. The provision for income taxes recorded in the three and six months ended June 30, 2016 included $17.5 million and $20.6 million, respectively, related to the Company's VIEs' 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 and six months ended June 30, 2015, the Company recorded a provision for income taxes of $30.1 million and $30.4 million, respectively, primarily related to the Company's VIEs' income tax provision.

As of June 30, 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 June 30, 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 June 30, 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 2014. 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 June 30, 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 and six months ended June 30, 2016 and 2015 were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(in thousands)			
Liability, beginning of the period	$ 7,224	$ 9,506	$ 7,944	$ 11,596
Cash payments	(3,833)	(2,584)	(7,764)	(6,569)
Cash received from subleases	3,008	2,799	6,016	5,275
Restructuring expense (income)	(11)	203	192	(378)
Liability, end of the period	$ 6,388	$ 9,924	$ 6,388	$ 9,924

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%.

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The activities related to the restructuring liability for the three and six months ended June 30, 2016 and 2015 were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(in thousands)			
Liability, beginning of the period	$ 5,449	$ 11,137	$ 5,964	$ 33,390
Cash payments	(3,096)	(3,095)	(6,252)	(22,351)
Cash received from subleases	2,361	—	4,769	—
Restructuring expense (income)	149	975	382	(2,022)
Liability, end of the period	$ 4,863	$ 9,017	$ 4,863	$ 9,017

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 and six months ended June 30, 2016 and 2015 were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(in thousands)			
Liability, beginning of the period	$ 1,262	$ 845	$ 1,450	$ 869
Cash payments	(234)	(893)	(673)	(1,223)
Restructuring expense	205	950	456	1,256
Liability, end of the period	$ 1,233	$ 902	$ 1,233	$ 902

P. Commitments and Contingencies

Financing Arrangements

As of June 30, 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 June 30, 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. Oral argument on the appeal took place on July 26, 2016. The Company believes the claims to be without merit and intend to vigorously defend the litigation. As of June 30, 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 June 30, 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 May 2016, the FDA accepted our supplemental New Drug Application, or 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. The FDA granted our request for priority review and set the target review date of September 30, 2016. 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.

We recently initiated a Phase 3 clinical trial for lumacaftor in combination with ivacaftor in patients with CF two to five years of age who are homozygous for the F508del mutation in their *CFTR* gene. The first part of the two-part clinical trial is evaluating safety and pharmacokinetics to inform dose selection for the second part of the clinical trial. The primary endpoint of the second part of the clinical trial is safety and tolerability, with multiple efficacy measurements as secondary endpoints.

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 ex-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 have 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 utilizes a weight-based dose of ivacaftor granules that can be mixed in soft foods or liquids. The clinical trial is enrolling 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 plan to complete enrollment in this clinical trial in August 2016 and expect data from this clinical trial to be available in the first half of 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 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.

If supported by data from the Phase 3 clinical program, Vertex plans to submit an NDA to the FDA for VX-661 in combination with ivacaftor in the second half of 2017.

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 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 clinical development in patients with CF to evaluate one or both of VX-152 and VX-440 in triple combinations with VX-661 and ivacaftor in the second half of 2016.

Moderna Collaboration

In July 2016, we entered into a strategic collaboration and licensing agreement with Moderna Therapeutics, Inc., pursuant to which we are seeking to identify and develop messenger Ribonucleic Acid Therapeutics™ for the treatment of CF.

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 have 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 have 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 recently completed enrollment of this clinical trial.

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 have 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 June 30,		Increase/(Decrease)		Six Months Ended June 30,		Increase/(Decrease)	
	2016	2015	$	%	2016	2015	$	%
	(in thousands)				(in thousands)			
Revenues	$ 431,608	$ 166,076	$ 265,532	160 %	$ 829,688	$ 304,585	$ 525,103	172 %
Operating costs and expenses	428,255	337,240	91,015	27 %	840,665	647,734	192,931	30 %
Other items, net	(67,878)	(17,684)	(50,194)	(284)%	(95,179)	(44,305)	$ (50,874)	(115)%
Net loss attributable to Vertex	$ (64,525)	$ (188,848)	$ (124,323)	(66)%	$ (106,156)	$ (387,454)	$ (281,298)	(73)%

Net Loss Attributable to Vertex

Net loss attributable to Vertex was $(64.5) million in the second quarter of 2016 as compared to a net loss attributable to Vertex of $(188.8) million in the second quarter of 2015. Our revenues increased significantly in the second quarter of 2016 as compared to the second 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 second quarter of 2016 as compared to the second quarter of 2015 primarily due to increases in research and development expenses, sales, general and administrative expenses and cost of product revenues. Other items, net in the second quarter of 2016 included an aggregate of $48.4 million in charges related to the increase in the fair value of the contingent milestone payments and royalties payable by us to Parion. In the near term, we expect net loss (income) attributable to Vertex will be dependent on expected increases in ORKAMBI net product revenues.

Net loss attributable to Vertex was $(106.2) million in the first half of 2016 as compared to a net loss attributable to Vertex of $(387.5) million in the first half of 2015. Our revenues increased significantly in the first half of 2016 as compared to the first half of 2015 due to net product revenues from ORKAMBI and increased KALYDECO net product revenues. Our operating costs and expenses increased in the first half of 2016 as compared to the first half of 2015 primarily due to increases in research and development expenses, sales, general and administrative expenses and cost of product revenues. Other items, net in the first half of 2016 included an aggregate of $57.4 million in charges related to the increase in the fair value of the contingent milestone payments and royalties payable by us to Parion.

Diluted Net Loss Per Share Attributable to Vertex Common Shareholders

Diluted net loss per share attributable to Vertex common shareholders was $(0.26) in the second quarter of 2016 as compared to a diluted net loss per share attributable to Vertex common shareholders of $(0.78) in the second quarter of 2015. Diluted net loss per share attributable to Vertex common shareholders was $(0.43) in the first half of 2016 as compared to a diluted net loss per share attributable to Vertex common shareholders of $(1.61) in the first half of 2015.

Revenues

	Three Months Ended June 30,		Increase/(Decrease)		Six Months Ended June 30,		Increase/(Decrease)	
	2016	2015	$	%	2016	2015	$	%
	(in thousands)				(in thousands)			
Product revenues, net	$ 425,651	$ 160,388	$ 265,263	165%	$ 820,061	$ 291,263	$ 528,798	182 %
Royalty revenues	5,282	5,077	205	4%	8,878	11,869	(2,991)	(25)%
Collaborative revenues	675	611	64	10%	749	1,453	(704)	(48)%
Total revenues	$ 431,608	$ 166,076	$ 265,532	160%	$ 829,688	$ 304,585	$ 525,103	172 %

Product Revenues, Net

	Three Months Ended June 30,		Increase/(Decrease)		Six Months Ended June 30,		Increase/(Decrease)	
	2016	2015	$	%	2016	2015	$	%
	(in thousands)				(in thousands)			
ORKAMBI	$ 245,496	$ —	N/A	N/A	$ 468,624	$ —	N/A	N/A
KALYDECO	180,235	154,888	25,347	16%	$ 350,744	$ 285,062	$ 65,682	23 %
INCIVEK	(80)	5,500	N/A	N/A	693	6,201	(5,508)	(89)%
Total product revenues, net	$ 425,651	$ 160,388	$ 265,263	165%	$ 820,061	$ 291,263	$ 528,798	182 %

Our total net product revenues increased in the second quarter and the first half of 2016 as compared to the second quarter and the first half of 2015 due to net product revenues from ORKAMBI, which was approved by the FDA in July 2015, and increased KALYDECO net product revenues. The FDA has set a target review date of September 30, 2016 for our 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.

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 half of 2016, revenues from additional patients who began treatment with ORKAMBI in the United States were partially offset by discontinuations by patients who had previously initiated treatment with ORKAMBI. We expect ORKAMBI net product revenues to continue to increase during the remainder of 2016. In the short term, 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 second quarter and first half of 2016, we recognized approximately $15.9 million and $24.7 million, respectively, in ex-U.S. ORKAMBI net product revenues, which were mainly from Germany. We are also selling ORKAMBI in France pursuant to an early access program, but are not recognizing any revenues because the price is not determinable.

The increase in KALYDECO net product revenues in the second quarter and first half of 2016, as compared to the second quarter and first half 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. In the second quarter and first half of 2016, we recognized approximately $76.9 million and $152.5 million, respectively, in ex-U.S. KALYDECO net product revenues.

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

Royalty Revenues

Our royalty revenues were $5.3 million and $8.9 million in the second quarter and the first half of 2016, respectively, as compared to $5.1 million and $11.9 million in the second quarter and the first half of 2015, respectively. 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 $0.7 million and $0.7 million in the second quarter and the first half of 2016, respectively, as compared to $0.6 million and $1.5 million in the second quarter and the first half of 2015, respectively. 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 June 30,		Increase/(Decrease)		Six Months Ended June 30,		Increase/(Decrease)	
	2016	2015	$	%	2016	2015	$	%
	(in thousands)				(in thousands)			
Cost of product revenues	$ 44,154	$ 15,409	$ 28,745	187 %	$ 93,943	$ 24,790	$ 69,153	279 %
Royalty expenses	1,098	1,451	(353)	(24)%	1,958	4,377	(2,419)	(55)%
Research and development expenses	271,008	223,858	47,150	21 %	526,868	439,457	87,411	20 %
Sales, general and administrative expenses	111,652	94,394	17,258	18 %	216,866	180,254	36,612	20 %
Restructuring expenses (income), net	343	2,128	(1,785)	(84)%	1,030	(1,144)	N/A	N/A
Total costs and expenses	$ 428,255	$ 337,240	$ 91,015	27 %	$ 840,665	$ 647,734	$ 192,931	30 %

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 second quarter and first half of 2016 as compared to the second quarter and first half of 2015, primarily due to increased net product revenues. The increase in cost of product revenues in the first half of 2016 as compared to the first half of 2015 also reflected 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 and that was included in cost of product revenues in the first quarter of 2016. 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 second quarter and the first half of 2016 decreased by $0.4 million and $2.4 million, respectively, as compared to the second quarter and the first half of 2015, primarily as a result of decreased INCIVO (telaprevir) sales by our collaborator Janssen NV.

Research and Development Expenses

	Three Months Ended June 30,		Increase/(Decrease)		Six Months Ended June 30,		Increase/(Decrease)	
	2016	2015	$	%	2016	2015	$	%
	(in thousands)				(in thousands)			
Research expenses	$ 79,886	$ 65,195	$ 14,691	23%	$ 142,896	$ 130,757	$ 12,139	9%
Development expenses	191,122	158,663	32,459	20%	383,972	308,700	75,272	24%
Total research and development expenses	$ 271,008	$ 223,858	$ 47,150	21%	$ 526,868	$ 439,457	$ 87,411	20%

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 $3.3 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 first half of 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 June 30,		Increase/(Decrease)		Six Months Ended June 30,		Increase/(Decrease)	
	2016	2015	$	%	2016	2015	$	%
	(in thousands)				(in thousands)			
Research Expenses:								
Salary and benefits	$ 19,268	$ 19,798	$ (530)	(3)%	$ 39,978	$ 40,254	$ (276)	(1)%
Stock-based compensation expense	13,409	13,081	328	3 %	24,065	26,857	(2,792)	(10)%
Laboratory supplies and other direct expenses	11,810	10,416	1,394	13 %	21,684	19,584	2,100	11 %
Outsourced services and acquired research assets	17,534	4,947	12,587	254 %	21,695	9,505	12,190	128 %
Infrastructure costs	17,865	16,953	912	5 %	35,474	34,557	917	3 %
Total research expenses	$ 79,886	$ 65,195	$ 14,691	23 %	$ 142,896	$ 130,757	$ 12,139	9 %

We maintain a substantial investment in research activities. Our research expenses increased by 23% in the second quarter of 2016 as compared to the second quarter of 2015 and increased by 9% in the first half of 2016 as compared to the first half of 2015. Outsourced services and acquired research assets in the second quarter of 2016 and first half of 2016 included approximately $10.0 million in expenses related to the acquisition of early-stage research assets for which there were no comparable expenses in the second 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 June 30,		Increase/(Decrease)		Six Months Ended June 30,		Increase/(Decrease)	
	2016	2015	$	%	2016	2015	$	%
	(in thousands)				(in thousands)			
Development Expenses:								
Salary and benefits	$ 45,062	$ 39,427	$ 5,635	14 %	$ 89,413	$ 81,622	$ 7,791	10 %
Stock-based compensation expense	27,231	28,551	(1,320)	(5)%	51,023	52,992	(1,969)	(4)%
Laboratory supplies and other direct expenses	13,005	8,473	4,532	53 %	21,255	15,417	5,838	38 %
Outsourced services	71,555	56,303	15,252	27 %	156,043	106,397	49,646	47 %
Drug supply costs	4,204	2,702	1,502	56 %	6,857	4,285	2,572	60 %
Infrastructure costs	30,065	23,207	6,858	30 %	59,381	47,987	11,394	24 %
Total development expenses	$ 191,122	$ 158,663	$ 32,459	20 %	$ 383,972	$ 308,700	$ 75,272	24 %

Our development expenses increased by $32.5 million, or 20%, in the second quarter of 2016 as compared to the second quarter of 2015 and increased by $75.3 million, or 24%, in the first half of 2016 as compared to the first half 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 June 30,		Increase/(Decrease)		Six Months Ended June 30,		Increase/(Decrease)	
	2016	2015	$	%	2016	2015	$	%
	(in thousands)				(in thousands)			
Sales, general and administrative expenses	$ 111,652	$ 94,394	$ 17,258	18%	$ 216,866	$ 180,254	$ 36,612	20%

Sales, general and administrative expenses increased by 18% in the second quarter of 2016 as compared to the second quarter of 2015 and increased by 20% in the first half of 2016 as compared to the first half 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 half of 2016.

Restructuring Expense, Net

We recorded restructuring expenses of $0.3 million and $1.0 million in the second quarter and the first half of 2016, respectively, as compared to restructuring expenses of $2.1 million in the second quarter of 2015 and restructuring credits of $1.1 million in the first half of 2015. Our restructuring expenses in the second quarter and first half of 2016 primarily relate to adjustments to our restructuring liability 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.

Other Items

Interest Expense, Net

Interest expense, net was $20.2 million and $40.9 million in the second quarter and the first half of 2016, respectively as compared to $21.1 million and $42.4 million in the second quarter the first half of 2015, respectively. During the remainder of 2016, we expect to incur approximately $30 million of interest expense associated with the leases for our corporate headquarters and approximately $9 million of interest expense related to our credit agreement.

Other (Expense) Income, Net

Other (expense) income, net was an expense of $1.2 million and income of $3.2 million in the second quarter and the first half of 2016, respectively as compared to income of $1.4 million and expense of $3.7 million in the second quarter and the first half of 2015, respectively. Other (expense) income, net in each of the second quarter and first half of 2016 and the second quarter and the first half of 2015 was primarily due to foreign exchange gains and losses.

Income Taxes

We recorded a provision for income taxes of $18.1 million and $23.6 million in the second quarter and the first half of 2016, respectively as compared to $30.1 million and $30.4 million in the second quarter and the first half of 2015, respectively. The provision for income taxes in the second quarter and first half of 2016 and 2015 was due to income tax on our VIEs, as well as state and foreign tax in various jurisdictions.

Noncontrolling Interest (VIEs)

The net loss (income) attributable to noncontrolling interest (VIEs) recorded on our condensed consolidated statements of operations reflects Parion and BioAxone's net loss (income) for the reporting period, adjusted for any changes during the reporting period in the fair value of the contingent milestone and royalty payments payable by us to Parion and BioAxone.

In the second quarter and the first half of 2016, the net income attributable to noncontrolling interest (VIEs) was $28.4 million and $33.9 million, respectively. In the second quarter and the first half of 2015, the net loss attributable to noncontrolling interest (VIEs) was $32.1 million and $32.2 million, respectively.

LIQUIDITY AND CAPITAL RESOURCES

As of June 30, 2016, we had cash, cash equivalents and marketable securities of $1.07 billion, which represented an increase of $29 million from $1.04 billion as of December 31, 2015. In the first half of 2016, we largely maintained our cash, cash equivalents and marketable securities balance due to increased cash receipts in the first half of 2016 from product sales, offset by increased cash expenditures in the first half 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. In the short term, 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 2014 and 2015, we also received significant proceeds from the issuance of common stock under our employee benefit plans, but we have received limited proceeds from employee benefit plans in 2016 and 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 seek to refinance our credit agreement based on our current credit profile and prevailing market conditions. 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, except that on July 1, 2016, we entered into a collaboration agreement with Moderna Therapeutics, Inc., or Moderna, pursuant to which Moderna is eligible to receive development and regulatory milestones of up to $275 million, as well as tiered royalty payments on future sales.

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 six months ended June 30, 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 six months ended June 30, 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 June 30, 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 June 30, 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 June 30, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. Other Information

Item 1. Legal Proceedings

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. Oral arguments on the appeal took place on July 26, 2016. 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, except that:

Risk Relating to the Referendum of the United Kingdom's Membership of the European Union.

On June 23, 2016, the United Kingdom, or the U.K., held a referendum in which voters approved an exit from the European Union, or the E.U., commonly referred to as "Brexit." As a result of the referendum, it is expected that the British government will begin negotiating the terms of the U.K.'s withdrawal from the E.U. A withdrawal could, among other outcomes, disrupt the free movement of goods, services and people between the U.K. and the E.U., undermine bilateral cooperation in key policy areas and significantly disrupt trade between the U.K. and the E.U. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which E.U. laws to replace or replicate. Given the lack of comparable precedent, it is unclear what financial, trade, regulatory and legal implications the withdrawal of the U.K. from the E.U. would have and how such withdrawal would affect us.

The announcement of Brexit caused significant volatility in global stock markets and currency exchange rate fluctuations that resulted in the strengthening of the U.S. dollar against foreign currencies in which we conduct business. The announcement of Brexit and the withdrawal of the U.K. from the E.U. may also create global economic uncertainty, which may cause third-party payors, including governmental organizations, to closely monitor their costs and reduce their spending budgets. Any of these effects of Brexit, among others, could adversely affect our business, financial condition and operating results.

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 our 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, 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 and the NDA for VX-661 in combination with ivacaftor;
- 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 trials;
- 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 June 30, 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
April 1, 2016 to April 30, 2016	35,566	$0.01	—	—
May 1, 2016 to May 31, 2016	12,960	$0.01	—	—
June 1, 2016 to June 30, 2016	18,772	$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. (1)
10.1	Vertex Pharmaceuticals Incorporated Employee Stock Purchase Plan, as amended and restated as of July 12, 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

(1) Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 27, 2016.

* Management contract, compensatory plan or agreement.

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

August 1, 2016 By: /s/ Ian F. Smith

Ian F. Smith

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

VERTEX PHARMACEUTICALS INCORPORATED
EMPLOYEE STOCK PURCHASE PLAN
(as amended and restated as of July 12, 2016)

ARTICLE 1
PURPOSE AND DEFINITIONS

SECTION 1.1. PURPOSE. The purpose of the Vertex Pharmaceuticals Incorporated Employee Stock Purchase Plan is to provide eligible employees with an opportunity to purchase shares of Common Stock in the Company through payroll deductions, thereby encouraging employees to share in the economic growth and success of the Company through stock ownership.

SECTION 1.2. DEFINITIONS. Whenever used in the Plan, unless the context clearly indicates otherwise, the following terms shall have the following meanings:

(a) "BOARD OF DIRECTORS" means the Board of Directors of the Company.

(b) "CODE" means the Internal Revenue Code of 1986, as the same may be amended from time to time, and references thereto shall include the valid Treasury regulations issued thereunder.

(c) "COMMITTEE" means the Management Development and Compensation Committee of the Board of Directors or such other committee of the Board of Directors designated by the Board of Directors to administer the Company's equity compensation plans.

(d) "COMMON STOCK" means shares of the $.01 par value common stock of the Company and any other stock or securities resulting from the adjustment thereof or substitution therefor as described in Section 3.4.

(e) "COMPANY" means Vertex Pharmaceuticals Incorporated or any successor by merger, purchase, or otherwise.

(f) "COMPENSATION" means the cash compensation received by an Employee for services, including pre-tax employee compensation made to the Company's 401(k) savings plan, but not including overtime or bonuses.

(g) "EFFECTIVE DATE" means July 1, 1992.

(h) "ELECTION" means an election by a Participant to terminate his or her participation in an Offering Period following the purchase of shares of Common Stock in accordance with Article V on the first Purchase Date of such Offering Period, which election shall be made within such Offering Period and on or prior to such first Purchase Date and shall be on a form furnished by the Company for such purpose and shall be made by having such Participant complete, sign and file such form with the Company in the manner prescribed by the Company; provided that if the Fair Market Value of the Common Stock on the first day of the applicable Offering Period is greater than the Fair Market Value of the Common Stock on the first Purchase Date of such Offering Period each Participant in such Offering Period shall automatically (i) be deemed to have completed, signed and filed an Election and (ii) be enrolled in the Offering Period commencing on the Offering Date immediately following such first Purchase Date, with the Participant's payroll deductions for such Offering Period determined by reference to the last payroll deduction authorization properly submitted by the Participant to the Company in accordance with the Plan.

(i) "EMPLOYEE" means any person who receives a regular stated compensation from the Company or a Subsidiary other than a pension, severance pay, retainer, or fee under contract.

(j) "FAIR MARKET VALUE" of a share of Common Stock on a particular date shall be the average of the highest and lowest quoted selling prices on such date (the "valuation date") on the securities market where the Common Stock of the Company is traded, or if there were no sales on the valuation date, on the immediately preceding date within a reasonable period (as determined in the sole discretion of the Committee) on which there were sales. In the event that there were no sales in such a market within a reasonable period, the fair market value shall be as determined in good faith by the Committee in its sole discretion. The Fair Market Value as determined in this paragraph shall be rounded down to the next lower whole cent if the foregoing calculation results in fractional cents.

(k) "OFFERING" means the offering of shares of Common Stock to Participants pursuant to this Plan.

(l) "OFFERING DATE" means each May 15 and November 15. If any such date shall fall other than on a business day, then the Offering Date shall be the next succeeding business day.

(m) "OFFERING PERIOD" means either (i) the period from an Offering Date through the second Purchase Date following such Offering Date or (ii) if a Participant validly exercises (or is deemed to validly exercise) an Election, the period from an Offering Date through the first Purchase Date following such Offering Date.

(n) "PARTICIPANT" means an Employee who has elected to participate in the Plan in accordance with and subject to the terms of the Plan and any procedures established by the Committee.

(o) "PURCHASE DATE" means each May 14 and November 14.

(p) "PLAN" means the Vertex Pharmaceuticals Incorporated Employee Stock Purchase Plan, an "employee stock purchase plan" within the meaning of Section 423(b) of the Code, together with any and all amendments thereto.

(q) "STOCK PURCHASE ACCOUNT," with respect to a Participant, means the account established on the books and records of the Company or a Subsidiary for such Participant representing the payroll deductions credited to such account in accordance with the provisions of the Plan.

(r) "SUBSIDIARY" means any corporation, fifty percent (50%) or more of the total combined voting power of all classes of stock of which is beneficially owned, directly or indirectly, by the Company.

ARTICLE II
PARTICIPATION

SECTION 2.1. PARTICIPATION REQUIREMENTS.

(a) COMMENCEMENT OF PARTICIPATION. Subject to Section 2.2 and Section 3.2(b), each person who becomes an Employee after the Effective Date may elect to become a Participant in the Plan, in accordance with and subject to the terms of the Plan and any procedures established by the Committee, on any Offering Date following the date on which such person becomes an Employee.

(b) ELIGIBILITY OF FORMER PARTICIPANTS. If a person terminates employment with the Company after becoming a Participant and subsequently resumes being an Employee of the Company, such person will again become eligible to participate on the Offering Date next following the date such person resumed being an Employee of the Company.

SECTION 2.2. EXCLUSIONS. Notwithstanding any provision of the Plan to the contrary, in no event shall the following persons be eligible to participate in the Plan:

(a) Any Employee whose customary employment is twenty (20) hours or less per week;

(b) Any Employee whose customary employment is for not more than five (5) months in any calendar year; or

(c) Any Employee who, immediately after the beginning of an Offering Period, owns (or under Section 423(b)(3) of the Code would be deemed to own) stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or of any Subsidiary.

ARTICLE III
OFFERING OF COMMON STOCK

SECTION 3.1. RESERVATION OF COMMON STOCK. The Board of Directors shall reserve 1,748,660 shares of Common Stock for issuance under the Plan after March 17, 2004, subject to adjustment in accordance with Section 3.4, provided that no more than 248,660 of such shares shall be issued prior to May 15, 2004. On May 13, 2008, the Board of Directors shall reserve an additional 2,000,000 shares of Common Stock for issuance under the Plan. On May 16, 2012, the Board of Directors shall reserve an additional 2,500,000 shares of Common Stock for issuance under the Plan.

SECTION 3.2. OFFERING OF COMMON STOCK.

(a) GENERAL. Subject to Sections 3.2(b) and 3.2(c), each Participant in the Plan on an Offering Date shall be entitled to purchase shares of Common Stock on each Purchase Date within the Offering Period that begins with such Offering Date with the amounts deducted from such Participant's Compensation during such Offering Period pursuant to Article IV, provided, however, that a Participant shall not participate in more than one Offering Period simultaneously. The purchase price for such shares of Common Stock shall be determined under Section 3.3.

(b) LIMITATIONS. Notwithstanding Section 3.2(a), no Participant may purchase shares of Common Stock under the Plan and under all other Code Section 423 employee stock purchase plans of the Company and its Subsidiaries, if any, at a rate in excess of $25,000 in fair market value of such shares (measured as of the relevant Offering Date) for each calendar year during which rights to purchase shares of Common Stock under the Plan are outstanding at any time. This paragraph is intended to be consistent with the limitation of Code section 423(b)(8) and shall be interpreted accordingly.

(c) MAXIMUM. Notwithstanding Section 3.2(a), and subject to adjustment pursuant to Section 3.4, the maximum aggregate number of shares of Common Stock that may be purchased by any Participant on any Purchase Date is 2,500 shares.

SECTION 3.3. DETERMINATION OF PURCHASE PRICE FOR OFFERED COMMON STOCK. The purchase price per share of the shares of Common Stock to be acquired by a Participant on a Purchase Date pursuant to an Offering shall be equal to eighty-five percent (85%) of the lesser of:

(a) the Fair Market Value of a share of Common Stock on the Offering Date for such Offering Period; or

(b) the Fair Market Value of a share of Common Stock on such Purchase Date;

provided, however, in no event shall the purchase price be less than the par value of a share of Common Stock.

SECTION 3.4. EFFECT OF CERTAIN TRANSACTIONS. The number of shares of Common Stock reserved for the Plan pursuant to Section 3.1, the maximum number of shares of Common Stock offered pursuant to Sections 3.2(b) and 3.2(c), and the determination under Section 3.3 of the purchase price per share of the shares of Common Stock offered to Participants pursuant to an Offering shall be appropriately adjusted to reflect any increase or decrease in the

number of issued shares of Common Stock resulting from a stock split, a consolidation of shares, the payment of a stock dividend, or any other capital adjustment affecting the number of issued shares of Common Stock. In the event that the outstanding shares of Common Stock shall be changed into or exchanged for a different number or kind of shares of stock or other securities of the Company or another corporation, whether through reorganization, recapitalization, merger, consolidation, or otherwise, then there shall be substituted for each share of Common Stock reserved for issuance under the Plan but not yet purchased by Participants, the number and kind of shares of stock or other securities into which each outstanding share of Common Stock shall be so changed or for which each such share shall be exchanged.

ARTICLE IV
PAYROLL DEDUCTIONS

SECTION 4.1. PAYROLL DEDUCTION ELECTIONS. Any Employee eligible to participate in the Plan may become a Participant and elect to have the Company deduct from the Compensation payable to such Participant during each Offering Period any amount between one percent (1%) and fifteen percent (15%) of such Participant's Compensation, in whole multiples of one percent (1%). Such election shall be made during the thirty day period preceding the Offering Period to which it first relates. Such election shall become effective as of the first day of such Participant's first pay period that begins on or after the first day of such Offering Period and shall remain effective for each successive pay period and for each subsequent Offering until changed or terminated pursuant to this Article IV. The percentage deduction specified by the Participant will be deducted from each payment of Compensation made to the Participant.

SECTION 4.2. ELECTION TO INCREASE OR DECREASE PAYROLL DEDUCTIONS. Subject to Section 4.4, a Participant who has a payroll deduction election in effect under Section 4.1 may prospectively increase or decrease, during an Offering Period, the percentage amount of the deductions being made by the Company from such Participant's Compensation (including a decrease to zero) by delivering to the Company written direction to make such change. Such change shall become effective as soon as practicable after the Company's receipt of such written direction and shall remain in effect until changed or terminated pursuant to this Article IV. A Participant shall be permitted to increase or decrease the percentage amount of the deductions being made from such Participant's Compensation only once during each of the portions of an Offering Period that ends on a Purchase Date; provided, however, a Participant may terminate the deductions being made from such Participant's Compensation at any time during such Offering Period. If a Participant terminates deductions, such Participant cannot resume deductions during that Offering Period.
A Participant who makes a hardship withdrawal from a retirement savings plan sponsored or maintained by the Company or its Subsidiaries qualifying under Code section 401(k) (a “401(k) Plan”) shall be deemed to have terminated his or her payroll deduction election as of the date of such hardship withdrawal, shall cease to be a Participant as of such date, and the entire amount remaining to the credit of such Participant in such Participant's Stock Purchase Account shall be refunded to such Participant, without interest, as soon as administratively practicable thereafter. To the extent the Company relies on the safe harbor provided by Section 1.401(k)-1(d)(3)(iv)(E)(2) of the Treasury Regulations, a Participant who has made a hardship withdrawal from a 401(k) Plan shall not be permitted to participate in the Plan until the first Offering Period that begins at least six (6) months after the date of the hardship withdrawal.

SECTION 4.3. TERMINATION OF ELECTION UPON TERMINATION OF EMPLOYMENT. The termination of employment of a Participant for any reason shall automatically terminate the Participant’s participation in the Plan and the entire amount remaining to the credit of such Participant in such Participant's Stock Purchase Account shall be refunded to such Participant, without interest, as soon as administratively practicable thereafter.

SECTION 4.4. FORM OF ELECTIONS. Except as otherwise permitted by the Company, any election by a Participant regarding participation in or withdrawal from the Plan or deductions from Compensation pursuant to this Article IV shall be on a form furnished by the Company for such purpose and shall be made by having such Participant file such form with the Company in the time and manner prescribed from time to time by the Company.

SECTION 4.5. TAXES. Payroll deductions shall be made on an after-tax basis. The Company shall have the right, as a condition of exercise, to make such provision as it deems necessary to satisfy its obligations to withhold federal, state

and local income or other taxes incurred by reason of the purchase or disposition of shares of Common Stock under the Plan. The Company in its discretion may, to the extent permitted by law, satisfy its withholding obligations by deduction from any payment of any kind due to the Participant or by withholding shares of Common Stock purchased under the Plan (but not in excess of the minimum statutory amounts or such greater amounts that, in the discretion of the Company, would not results in adverse accounting consequences to the Company). By electing to participate in the Plan, each Participant agrees to provide such information about any transfer of any shares of Common Stock acquired under the Plan as may be requested by the Company or any Subsidiary in order to assist it in complying with applicable tax laws.

ARTICLE V
STOCK PURCHASE ACCOUNTS AND PURCHASE OF COMMON STOCK

SECTION 5.1. STOCK PURCHASE ACCOUNTS. A Stock Purchase Account shall be established and maintained on the books and records of the Company for each Participant. Amounts deducted from a Participant's Compensation pursuant to Article IV shall be credited to such Participant's Stock Purchase Account. No interest or other increment shall accrue or be payable to any Participant with respect to any amounts credited to such Stock Purchase Accounts. All amounts credited to such Stock Purchase Accounts shall be withdrawn, paid, or applied toward the purchase of shares of Common Stock pursuant to the provisions of this Article V.

SECTION 5.2. PURCHASE OF COMMON STOCK.

(a) GENERAL. As of each Purchase Date, the amount to the credit of a Participant in such Participant's Stock Purchase Account shall be used to purchase from the Company on such Participant's behalf the largest number of whole shares of Common Stock which can be purchased at the price determined under Section 3.3 with the amount then credited to such Participant's Stock Purchase Account, subject to the limitations set forth in Article III on the maximum number of shares of Common Stock such Participant may purchase. As of such date, such Participant's Stock Purchase Account shall be charged with the aggregate purchase price of the shares of Common Stock purchased on such Participant's behalf. No brokerage or other fees are to be charged upon a purchase. Stock transfer taxes, if any, shall be paid by the Company. The remaining balance attributable to any fractional shares, if any, credited to such Participant's Stock Purchase Account shall be carried forward and used to purchase shares of Common Stock on the next succeeding Purchase Date; provided that any excess balance remaining in a Participant's Stock Purchase Account after the application of the limitations or maximums in Section 3.2 shall be refunded to the Participant without interest as soon as is administratively practicable.

(b) ISSUANCE OF COMMON STOCK. The shares of Common Stock purchased for a Participant as of a Purchase Date shall be deemed to have been issued by the Company for all purposes as of the close of business on such date. Prior to such date, none of the rights and privileges of a stockholder of the Company shall exist with respect to such shares of Common Stock. As soon as practical, the Company shall deliver to the Participant’s account maintained by the broker engaged by the Company to administer the Company equity program, the number of shares of Common Stock purchased for such Participant and the aggregate number of shares of Common Stock held on behalf of such Participant under the Plan.

(c) INSUFFICIENT COMMON STOCK AVAILABLE. If, as of any Purchase Date, the aggregate amounts in Stock Purchase Accounts available for the purchase of shares of Common Stock pursuant to Section 5.2(a) would purchase a number of shares of Common Stock in excess of the number of shares of Common Stock then available for purchase under Section 3.1 of the Plan, (i) the number of shares of Common Stock which would otherwise be purchased for each Participant on such date shall be reduced proportionately to the extent necessary to eliminate such excess, (ii) the remaining balance to the credit of each Participant in each such Participant's Stock Purchase Accounts shall be refunded to each such Participant without interest as soon as administratively practicable, and (iii) the

Plan shall terminate automatically upon the refund of the remaining balance in such Stock Purchase Accounts.

SECTION 5.3. WITHDRAWAL FROM PLAN PRIOR TO PURCHASE OF COMMON STOCK. In the event (i) a Participant elects in writing for any reason to withdraw from the Plan during an Offering Period or (ii) a Participant's employment with the Company terminates for any reason prior to the end of an Offering Period, the entire amount remaining to the credit of such Participant in such Participant's Stock Purchase Account shall be refunded to such Participant (or, if such Participant is deceased, to such Participant's beneficiary) without interest as soon as administratively practicable after such withdrawal or termination of employment (as the case may be).

ARTICLE VI
COMMITTEE

SECTION 6.1. POWERS OF THE COMMITTEE. The Committee shall administer the Plan. The Committee shall have all powers necessary to enable it to carry out its duties under the Plan properly. Not in limitation of the foregoing, the Committee shall have the authority to determine eligibility under the Plan, to designate Subsidiaries as eligible to participate in the Plan, to interpret the Plan, to prescribe forms, rules and procedures under the Plan, to adopt, amend, rescind, administer, and interpret such forms, rules and procedures and otherwise to do all things necessary or advisable to carry out the terms of the Plan. To the extent permitted by applicable law, the Committee in its discretion may delegate any or all of its powers under the Plan to one or more officers or employees of the Company.. The decision of the Committee upon all matters within the scope of its authority shall be final and conclusive on all persons, except to the extent otherwise provided by law.

SECTION 6.2. INDEMNIFICATION OF THE COMMITTEE. The Company agrees to indemnify and hold harmless the members of the Committee against any liabilities, loss, costs, or damage that they may incur in acting as such members and to assume the defense of any and allocations, suits, or proceedings against the members of the Committee, to the extent permitted by applicable law.

ARTICLE VII
AMENDMENT AND TERMINATION

SECTION 7.1. AMENDMENT OF THE PLAN. The Company expressly reserves the right, at any time and from time to time, to amend in whole or in part any of the terms and provisions of the Plan; provided, however, no amendment may without the approval of the shareholders of the Company increase the number of shares of Common Stock reserved under the Plan.

SECTION 7.2. TERMINATION OF PLAN. The Company expressly reserves the right, at any time and for whatever reason it may deem appropriate, to suspend or terminate the Plan. The Plan shall continue in effect until terminated pursuant to (i) the preceding sentence or (ii) Section 5.2(c). Upon any termination of the Plan, the entire amount credited to the Stock Purchase Account of each Participant shall be refunded to each such Participant without interest as soon as is administratively practicable.

SECTION 7.3. PROCEDURE FOR AMENDMENT OR TERMINATION. Any amendment to the Plan or termination of the Plan may be retroactive to the extent not prohibited by applicable law. Any amendment to the Plan or termination of the Plan shall be made by the Company by resolution of the Board of Directors (subject to Section 7.1) and shall not require the approval or consent of any Participant or beneficiary in order to be effective.

ARTICLE VIII
MISCELLANEOUS

SECTION 8.1. TRANSFERABILITY OF RIGHTS. Rights under the Plan are exercisable during a Participant's lifetime only by the Participant and such rights may not be sold, pledged, assigned or transferred in any manner.

SECTION 8.2. NO EMPLOYMENT RIGHTS. Participation in the Plan shall not give any employee of the Company or any Subsidiary any right to remain employed or, upon termination of employment, any right or interest in the Plan, except as expressly provided herein.

SECTION 8.3. COMPLIANCE WITH LAW. No shares of Common Stock shall be issued under the Plan prior to compliance by the Company to the satisfaction of its counsel with any applicable laws.

SECTION 8.4. CONSTRUCTION. Article, Section, and paragraph headings have been inserted in the Plan for convenience of reference only and are to be ignored in any construction of the provisions hereof. If any provision of the Plan shall be invalid or unenforceable, the remaining provisions shall nevertheless be valid, enforceable, and fully effective. It is the intent that the Plan shall at all times constitute an "employee stock purchase plan" within the meaning of Section 423(b) of the Code, and the Plan shall be construed, and interpreted to remain such. The Plan shall be construed, administered, regulated, and governed by the laws of the United States to the extent applicable, and to the extent such laws are not applicable, by the laws of The Commonwealth of Massachusetts. Without limiting the foregoing, all Participants for an Offering Period shall have the same rights and privileges with respect to their rights to acquire shares of Common Stock under the Plan for such period, subject to the express terms hereof.

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: August 1, 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: August 1, 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 June 30, 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: August 1, 2016

/s/ Jeffrey M. Leiden

Jeffrey M. Leiden
Chief Executive Officer and President

Date: August 1, 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.