Vertex Reports Third-Quarter 2018 Financial Results

October 24, 2018

-Third-quarter 2018 total CF product revenues of $783 million, a 42% increase compared to $550 million in the third quarter of 2017-

-Company reiterates full-year 2018 total CF product revenue guidance of $2.9 to $3.0 billion; reiterates full-year 2018 combined non-GAAP R&D and SG&A expense guidance of $1.50 to $1.55 billion-

BOSTON--(BUSINESS WIRE)--Oct. 24, 2018-- Vertex Pharmaceuticals Incorporated (Nasdaq: VRTX) today reported consolidated financial results for the third quarter ended September 30, 2018 and reviewed recent progress with its approved and investigational medicines. Vertex also reiterated its guidance for full-year 2018 total CF product revenues and guidance for combined GAAP and non-GAAP R&D and SG&A expenses.

Third-Quarter 2018 Financial Highlights

	Three Months Ended September 30,		
	2018	**2017**	**% Change**
	(in millions, except per share and percentage data)		
TOTAL CF product revenues, net	$ 783	$ 550	42 %
GAAP net income (loss)	$ 129	$ (103)	
GAAP net income (loss) per share - diluted	$ 0.50	$ (0.41)	
Non-GAAP net income	$ 282	$ 136	107 %
Non-GAAP net income per share - diluted	$ 1.09	$ 0.53	106 %

"We continue to make significant progress toward our goal of developing medicines for all people with CF as marked by the recent approvals of KALYDECO and ORKAMBI in younger children, the launch of SYMDEKO in the U.S. and the rapid progress we have made with our triple combination pivotal studies," said Jeffrey Leiden, M.D., Ph.D., Chairman, President and Chief Executive Officer of Vertex. "In our development pipeline, we are advancing potential medicines for pain, sickle cell disease and beta thalassemia and are also beginning to advance additional compounds from research into early clinical development that could fundamentally change the treatment of other serious diseases in the future."

Dr. Leiden continued, "Our ability to treat more and more people with CF is driving revenue and earnings growth and significant cash flow generation, which enables the company to invest to discover and develop transformative future medicines for the treatment of CF and other life-threatening diseases."

Third-Quarter 2018 CF Net Product Revenues

	Three Months Ended September 30,	
	2018	**2017**
	(in millions)	
TOTAL CF product revenues, net	$ 783	$ 550
KALYDECO product revenues, net	$ 246	$ 213
ORKAMBI product revenues, net	$ 282	$ 336
SYMDEKO product revenues, net	$ 255	$ —

Total CF net product revenues increased 42% compared to the third quarter of 2017, primarily driven by the rapid uptake of SYMDEKO in the U.S. across all eligible patients.

Third-Quarter 2018 R&D and SG&A Expenses

	Three Months Ended September 30,		
	2018	**2017**	
	(in millions)		
Combined GAAP R&D and SG&A expenses	$ 468	$ 576	*

GAAP R&D expense	$ 331	$ 455	*
GAAP SG&A expense	$ 137	$ 121	
Combined Non-GAAP R&D and SG&A expenses	$ 379	$ 334	
Non-GAAP R&D expense	$ 274	$ 243	
Non-GAAP SG&A expense	$ 105	$ 91	

** The third quarter of 2017 includes a $160M upfront payment to Concert Pharmaceuticals for VX-561.*

Combined non-GAAP R&D and SG&A expenses increased compared to the third quarter of 2017 due to the advancement of the company's portfolio of triple combination regimens for CF and investments to support the treatment of CF globally.

Combined GAAP R&D and SG&A expenses decreased compared to the third quarter of 2017 due to an upfront payment of $160.0 million related to the acquisition of VX-561, an investigational once-daily CFTR potentiator, from Concert Pharmaceuticals in the third quarter of 2017, partially offset by expenses related to the advancement of the company's portfolio of triple combination regimens for CF and investments to support the treatment of CF globally.

Third-Quarter 2018 Net Income and Cash Position

Non-GAAP net income increased 107% compared to the third quarter of 2017 largely driven by the strong growth in total CF product revenues.

GAAP net income increased compared to the third quarter of 2017 largely driven by the strong growth in total CF product revenues and by a reduction to research and development expenses due to the $160.0 million payment to Concert in the third quarter of 2017.

Cash, cash equivalents and marketable securities as of September 30, 2018 were approximately $3.1 billion, an increase of approximately $1.0 billion compared to $2.1 billion as of December 31, 2017.

2018 Financial Guidance

Vertex today reiterated its full-year 2018 total CF product revenue guidance and guidance for combined GAAP and non-GAAP R&D and SG&A expenses as summarized below:

	Current FY 2018	
TOTAL CF product revenues	$ 2.9 - 3.0 billion	Unchanged
Combined GAAP R&D and SG&A expenses	$ 1.80 - 1.95 billion	Unchanged
Combined Non-GAAP R&D and SG&A expenses	$ 1.50 - 1.55 billion	Unchanged

"We have created a strong financial profile for our business and are poised for continued growth as we make progress developing medicines for many more people with CF," said Ian Smith, Executive Vice President and Chief Operating Officer. "Nearer term, we anticipate revenue growth in 2019 will be driven by the impact of the SYMDEKO and SYMKEVI launches and recently completed reimbursement agreements and label expansions for our CF medicines. The potential for additional revenue growth in 2019 will be dependent upon gaining new reimbursement agreements in key countries, including the UK and France. Continued growth beyond 2019 will be driven by the potential approval, reimbursement and uptake of a triple combination medicine for the large number of patients with a minimal function mutation who currently do not have a treatment for the cause of their CF."

Business Highlights

TRIPLE COMBINATION REGIMENS

Bringing triple combination regimens to people with CF as quickly as possible

- Data are expected in late 2018 for the two Phase 3 studies of VX-659 in triple combination with tezacaftor and ivacaftor in people with CF who have one *F508del* mutation and one minimal function mutation and in people who have two *F508del* mutations.
- Enrollment is expected to be complete in the fourth quarter of 2018 for the two Phase 3 studies of VX-445 in triple combination with tezacaftor and ivacaftor in people with CF who have one *F508del* mutation and one minimal function mutation and in people who have two *F508del* mutations. The company plans to report data from these studies in the first quarter of 2019.
- Vertex plans to evaluate data from both the VX-659 and VX-445 Phase 3 triple combination programs to choose the best regimen to submit for potential regulatory approval. Together these data are expected to provide the basis for submission of a New Drug Application (NDA) to the U.S. Food and Drug Administration (FDA) for people who have one *F508del* mutation and one minimal function mutation no later than mid-2019.

Evaluating VX-659 and VX-445 in children

- Studies are underway to evaluate both the VX-659 and VX-445 triple combination regimens in children with CF ages 6 through 11 who have one *F508del* mutation and one minimal function mutation and in children who have two *F508del* mutations. These studies are intended to support potential approval of a triple combination regimen in children ages 6 through 11.

Potential once-daily regimens

- In early 2018, the company reported positive safety and efficacy results for the once-daily potentiator VX-561 when dosed as part of a triple combination regimen including VX-659 or VX-445 and tezacaftor. The once-daily triple combination regimens were generally well tolerated, and the majority of adverse events were mild to moderate.
- Based on recent feedback from the FDA, Vertex plans to initiate a Phase 2 study in the first half of 2019 evaluating VX-561 as a monotherapy in people with CF who have a gating mutation.

SYMKEVI in the European Union

- On July 27, 2018, Vertex announced that the European Medicines Agency (EMA) Committee for Medicinal Products for Human Use (CHMP) adopted a positive opinion for SYMKEVI (tezacaftor/ivacaftor) in a combination regimen with ivacaftor (KALYDECO) for the treatment of people with CF ages 12 and older who either have two copies of the *F508del* mutation or who have one copy of the *F508del* mutation and a copy of one of the following 14 mutations in which the CFTR protein shows residual activity: *P67L, R117C, L206W, R352Q, A455E, D579G, 711+3A→G, S945L, S977F, R1070W, D1152H, 2789+5G→A, 3272-26A→G,* and *3849+10kbC→T*.
- Approval for SYMKEVI in the European Union (EU) is expected in the fourth quarter of 2018.

APPROVED CF MEDICINES

Establishing long-term reimbursement outside of the U.S.

- On October 1, 2018, Vertex announced that it had entered into an innovative access contract with the Danish pharmaceutical and procurement organization, Amgros. This agreement provides eligible Danish CF patients access to all of Vertex's current and future CF medicines. An agreement in Austria was also recently secured to provide access to ORKAMBI for all people with CF ages 6 through 11 who have two copies of the *F508del* mutation.
- In September 2018, Vertex announced a reimbursement agreement in Australia for the use of ORKAMBI in people with CF ages 6 and older who have two copies of *F508del* mutation. A pathway to access for future Vertex CF medicine, tezacaftor/ivacaftor, was also established as part of this process.

Treating patients at younger ages with CFTR modulators: The company continues to make significant progress toward gaining approval for its CF medicines to be used earlier in the course of disease progression. Recent highlights include:

- Vertex plans to submit a supplemental New Drug Application (sNDA) to the FDA in late 2018 based on positive data from a recently completed 24-week single-arm Phase 3 safety study of **tezacaftor/ivacaftor** in 70 children ages 6 through 11 who have two copies of the *F508del* mutation or who have one copy of the *F508del* mutation and one residual function mutation. The primary endpoint of the study was safety. The study met its primary safety endpoint, and safety data from the study showed that the treatment was generally well tolerated and safety data were consistent with those seen in previous Phase 3 studies of tezacaftor/ivacaftor in children ages 12 and older. To support approval in the EU, an eight-week, double-blind, placebo-controlled Phase 3 efficacy study is ongoing to evaluate tezacaftor/ivacaftor in approximately 65 children ages 6 through 11. The primary endpoint of this study is the absolute change in lung clearance index.
- **KALYDECO** was approved in August 2018 in the U.S. for children with CF ages 12 to <24 months. On October 19, 2018, Vertex announced that it received a positive opinion from the European CHMP for KALYDECO in this age group. The company expects a decision in the EU in late 2018.
- On October 18, 2018, Vertex announced positive data from a Phase 3 study evaluating **ivacaftor** in infants ages 6 to <12 months. These are the first data to demonstrate the potential to treat the underlying cause of CF in patients as young as six months old. The company plans to submit an sNDA to the FDA and a line extension to the EMA in late 2018.
- **ORKAMBI** was approved in August 2018 in the U.S. for children with CF ages 2 to 5 years old. A line extension has been submitted to the EMA with a decision anticipated in the first half of 2019.
- Dosing is underway in Phase 3 study evaluating **lumacaftor/ivacaftor** in children ages 12 to <24 months.

LATE-STAGE RESEARCH & CLINICAL DEVELOPMENT

Vertex continues to invest to discover and develop transformative medicines in other serious diseases. The company has a portfolio of potential medicines across a range of diseases, including:

Sickle Cell Disease & β-Thalassemia: Vertex and its partner CRISPR Therapeutics are developing the autologous gene-edited hematopoietic stem cell therapy CTX001 for the treatment of β-thalassemia and sickle cell disease.

- In the U.S., Vertex and CRISPR Therapeutics recently announced that the FDA lifted the clinical hold on the CTX001 Investigational New Drug application (IND) for the treatment of sickle cell disease that was submitted earlier this year. The companies previously received regulatory approval to conduct a Phase 1/2 study in multiple countries in Europe and Canada. Vertex and CRISPR plan to initiate the study in sickle cell disease by the end of 2018. The first two patients in the study will be dosed sequentially and, pending data from these initial two patients, subsequent patients can be dosed

concurrently.
- Enrollment for a Phase 1/2 study in people with β-thalassemiais currently open at multiple clinical trial sites in Europe, and the first patient has now enrolled in this study. The Phase 1/2 trial is designed to assess safety and efficacy in adult transfusion-dependent non-beta zero/beta zero β-thalassemia patients. Similar to the study in sickle cell disease, the first two patients in the study will be dosed sequentially and, pending data from these initial two patients, subsequent patients can be dosed concurrently. This study is designed to enroll up to 45 patients.

Pain:Potential Role of Nav1.8 Inhibition

- The company is planning to initiate a Phase 2b dose-ranging study evaluating the Nav1.8 inhibitor VX-150 using an oral formulation in patients with acute pain following bunionectomy surgery. The study is designed to evaluate multiple oral doses of VX-150 to potentially support pivotal development in acute pain.
- Enrollment is complete in a Phase 2 proof-of-concept study evaluating VX-150 for the treatment of pain caused by small fiber neuropathy, and data are expected in early 2019.
- Vertex continues to invest to discover other potential pain molecules that target the sodium channel 1.8 (Nav1.8) and other new mechanisms.

Alpha-1 Antitrypsin Deficiency (AAT)

- Vertex has advanced multiple small molecule correctors of AAT through preclinical development and is preparing to initiate clinical development for the first of these potential medicines by the end of 2018. AAT is a genetic disorder that is caused by mutations in a single gene that result in life-shortening systemic complications, primarily in the lung and liver.

Acute Spinal Cord Injury

- In October 2014, VRTX in-licensed VX-210 (Cethrin) from BioAxone BioSciences, Inc. as a potential new treatment for spinal cord injury. An interim analysis of a Phase 2b study evaluating VX-210 in patients with certain acute cervical spinal cord injuries was recently conducted and based on the available data, the study's Data Safety Monitoring Board (DSMB) recommended to stop the study early due to futility. There were no safety concerns noted in the DSMB's review of the data. Based on the DSMB's recommendation and Vertex's review of the data, the company has decided to stop all development of VX-210, and will terminate the Phase 2b study. Vertex will discuss with BioAxone the next steps for the program.

Non-GAAP Financial Measures

In this press release, Vertex's financial results and financial guidance are provided in accordance with accounting principles generally accepted in the United States (GAAP) and using certain non-GAAP financial measures. In particular, non-GAAP financial results and guidance exclude from Vertex's pre-tax net income (loss) (i) stock-based compensation expense, (ii) revenues and expenses related to business development transactions including collaboration agreements, asset acquisitions and consolidated variable interest entities, which included an asset impairment charge and the effects of the deconsolidation of a variable interest entity in 2017 and (iii) other adjustments, including gains or losses related to the fair value of the company's strategic investment in CRISPR. The company's non-GAAP financial results also exclude from its provision for or benefit from income taxes (i) the estimated tax impact related to its non-GAAP adjustments to pre-tax net income (loss) described above as well as (ii) non-operating tax adjustments, which are not associated with Vertex's normal, recurring operations. These results are provided as a complement to results provided in accordance with GAAP because management believes these non-GAAP financial measures help indicate underlying trends in the company's business, are important in comparing current results with prior period results and provide additional information regarding the company's financial position. Management also uses these non-GAAP financial measures to establish budgets and operational goals that are communicated internally and externally and to manage the company's business and to evaluate its performance. The company adjusts, where appropriate, for both revenues and expenses in order to reflect the company's operations. The company provides guidance regarding product revenues in accordance with GAAP and provides guidance regarding combined research and development and sales, general, and administrative expenses on both a GAAP and a non-GAAP basis. The guidance regarding GAAP research and development expenses and sales, general and administrative expenses does not include estimates regarding expenses associated with any potential future business development activities. A reconciliation of the GAAP financial results to non-GAAP financial results is included in the attached financial information.

Vertex Pharmaceuticals Incorporated
Third-Quarter Results
Consolidated Statements of Operations Data
(in thousands, except per share amounts)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	**2017**	**2018**	**2017**
Revenues:				
Product revenues, net	$ 782,511	$ 549,642	$ 2,170,152	$ 1,544,252

Royalty revenues	1,238	2,231	3,679	6,643
Collaborative revenues (Note 1)	786	26,292	3,660	286,123
Total revenues	784,535	578,165	2,177,491	1,837,018
Costs and expenses:				
Cost of sales	111,255	72,874	287,250	191,067
Research and development expenses (Note 2)	330,510	454,947	978,595	1,017,961
Sales, general and administrative expenses	137,295	120,710	404,406	361,285
Restructuring (income) expenses	(174)	337	(188)	13,859
Intangible asset impairment charge (Note 3)	—	255,340	—	255,340
Total costs and expenses	578,886	904,208	1,670,063	1,839,512
Income (loss) from operations	205,649	(326,043)	507,428	(2,494)
Interest expense, net	(8,143)	(13,574)	(29,346)	(45,003)
Other (expense) income, net (Note 3)(Note 4)	(60,995)	(77,553)	89,662	(80,634)
Income (loss) from operations before provision for (benefit from) income taxes	136,511	(417,170)	567,744	(128,131)
Provision for (benefit from) income taxes (Note 3)(Note 5)	8,055	(125,903)	5,737	(117,581)
Net income (loss)	128,456	(291,267)	562,007	(10,550)
Loss (income) attributable to noncontrolling interest (Note 3)	290	188,315	(15,638)	173,350
Net income (loss) attributable to Vertex	$ 128,746	$ (102,952)	$ 546,369	$ 162,800
Amounts per share attributable to Vertex common shareholders:				
Net income (loss):				
Basic	$ 0.51	$ (0.41)	$ 2.15	$ 0.66
Diluted	$ 0.50	$ (0.41)	$ 2.11	$ 0.64
Shares used in per share calculations:				
Basic	254,905	250,268	254,096	247,963
Diluted	259,788	250,268	258,972	252,095

Reconciliation of GAAP to Non-GAAP Net Income
Third-Quarter Results
(in thousands, except per share amounts)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	**2017**	**2018**	**2017**
GAAP net income (loss) attributable to Vertex	$ 128,746	$ (102,952)	$ 546,369	$ 162,800
Stock-based compensation expense	85,532	73,770	246,104	215,334
Collaborative and transaction revenues and expenses (Note 6)	1,979	164,819	27,877	(57,430)
Other adjustments (Note 7)	62,557	770	(84,697)	16,006
Total non-GAAP adjustments to pre-tax net income (loss) attributable to Vertex	150,068	239,359	189,284	173,910
Non-operating tax adjustments (Note 8)	3,114	—	(13,715)	—
Non-GAAP net income attributable to Vertex	$ 281,928	$ 136,407	$ 721,938	$ 336,710
Amounts per diluted share attributable to Vertex common shareholders:				
GAAP	$ 0.50	$ (0.41)	$ 2.11	$ 0.64
Non-GAAP	$ 1.09	$ 0.53	$ 2.79	$ 1.33
Shares used in diluted per share calculations:				
GAAP	259,788	250,268	258,972	252,095
Non-GAAP	259,788	255,792	258,972	252,095

Reconciliation of GAAP to Non-GAAP Revenues and Expenses
Third-Quarter Results
(in thousands)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	**2017**	**2018**	**2017**
GAAP total revenues	$ 784,535	$ 578,165	$ 2,177,491	$ 1,837,018
Collaborative and transaction revenues (Note 6)	(680)	(26,291)	(3,540)	(285,975)

Non-GAAP total revenues	$ 783,855	$ 551,874	$ 2,173,951	$ 1,551,043

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	**2017**	**2018**	**2017**
GAAP cost of sales	$ 111,255	$ 72,874	$ 287,250	$ 191,067
Stock-based compensation expense (Note 9)	(1,259)	—	(3,263)	—
Non-GAAP cost of sales	$ 109,996	$ 72,874	$ 283,987	$ 191,067
GAAP research and development expenses	$ 330,510	$ 454,947	$ 978,595	$ 1,017,961
Stock-based compensation expense	(52,918)	(46,186)	(153,018)	(134,855)
Collaborative and transaction expenses (Note 6)	(2,619)	(165,413)	(8,079)	(172,446)
Other adjustments (Note 7)	(1,388)	(136)	(3,128)	(408)
Non-GAAP research and development expenses	$ 273,585	$ 243,212	$ 814,370	$ 710,252
GAAP sales, general and administrative expenses	$ 137,295	$ 120,710	$ 404,406	$ 361,285
Stock-based compensation expense	(31,355)	(27,584)	(89,823)	(80,479)
Collaborative and transaction expenses (Note 6)	(289)	(2,272)	(1,704)	(9,260)
Other adjustments (Note 7)	(184)	(297)	(580)	(1,739)
Non-GAAP sales, general and administrative expenses	$ 105,467	$ 90,557	$ 312,299	$ 269,807
Combined non-GAAP R&D and SG&A expenses	$ 379,052	$ 333,769	$ 1,126,669	$ 980,059

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	**2017**	**2018**	**2017**
GAAP interest expense, net and other income (expense), net	$ (69,138)	$ (91,127)	$ 60,316	$ (125,637)
Collaborative and transaction expenses (Note 6)	(38)	76,581	(72)	76,507
Other adjustments (Note 7)	61,159	—	(88,217)	—
Non-GAAP interest expense, net and other income (expense), net	$ (8,017)	$ (14,546)	$ (27,973)	$ (49,130)
GAAP provision for (benefit from) income taxes	$ 8,055	$ (125,903)	$ 5,737	$ (117,581)
Estimated income taxes related to non-GAAP adjustments to pre-tax income (loss) (Note 10)	(79)	120,181	(6,068)	111,658
Non-operating tax adjustments (Note 8)	(3,114)	—	13,715	—
Non-GAAP provision for (benefit from) income taxes (Note 5)	$ 4,862	$ (5,722)	$ 13,384	$ (5,923)

Condensed Consolidated Balance Sheets Data
(in thousands)
(unaudited)

	September 30, 2018	**December 31, 2017**
Assets		
Cash, cash equivalents and marketable securities	$ 3,055,885	$ 2,088,666
Accounts receivable, net	379,755	281,343
Inventories	124,150	111,830
Property and equipment, net	808,352	789,437
Intangible assets and goodwill	79,384	79,384
Other assets	173,314	195,354
Total assets	$ 4,620,840	$ 3,546,014
Liabilities and Shareholders' Equity		
Accounts payable and accruals	$ 596,389	$ 517,955
Other liabilities	514,813	415,501
Deferred tax liability	9,414	6,341
Construction financing lease obligation	565,743	563,911
Shareholders' equity	2,934,481	2,042,306
Total liabilities and shareholders' equity	$ 4,620,840	$ 3,546,014
Common shares outstanding	255,611	253,253

Note 1: In the nine months ended September 30, 2017, collaborative revenues were primarily attributable to a $230.0 million upfront payment earned from the company's collaboration with Merck KGaA, Darmstadt, Germany. During the three and nine months ended September 30, 2017, collaborative revenues also include $20.0 million and $40.0 million, respectively, that Parion Sciences Inc., a company that Vertex consolidated as a variable interest entity ("VIE") during the first three quarters of 2017, earned from a collaboration agreement with a third party.

Note 2: In July 2017, the company completed the acquisition of VX-561 (formerly CTP-656) from Concert Pharmaceuticals, Inc. The company paid Concert $160.0 million in cash to acquire VX-561, which was recorded as a research and development expense in the three and nine months ended September 30, 2017.

Note 3: The company consolidates the financial statements of one of its collaborators, BioAxone Biosciences, Inc. during the three and nine months ended September 30, 2018 and 2017. BioAxone is consolidated because Vertex has licensed the rights to develop its most significant intellectual property asset. Each reporting period Vertex estimates the fair value of the contingent payments payable by Vertex to BioAxone. Any increase in the fair value of these contingent payments results in a decrease in net income attributable to Vertex on a dollar-for-dollar basis. The fair value of contingent payments is evaluated each quarter and any change in the fair value is reflected in the company's statement of operations.

Vertex also consolidated Parion during the first three quarters of 2017. In the third quarter of 2017, the company determined that the value of Parion's pulmonary ENaC platform had become impaired and that the fair value of the intangible asset was zero as of September 30, 2017. Accordingly, an impairment charge of $255.3 million and a benefit from income taxes of $126.2 million resulting from this charge and subsequent deconsolidation of Parion attributable to noncontrolling interest was recorded in the third quarter of 2017. The total impact of this transaction on a GAAP basis was a $198.7 million loss attributable to noncontrolling interest and a $7.1 million loss attributable to Vertex and had no impact on Vertex's non-GAAP net income in the third quarter of 2017.

Note 4: In accordance with ASU No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*, which became effective on January 1, 2018, the company recorded a loss of $61.2 million in the three months ended September 30, 2018 and a net gain of $85.3 million in the nine months ended September 30, 2018 to "Other income (expense), net", related to changes in the fair value of the company's investment in CRISPR Therapeutics AG. Prior to the adoption of ASU 2016-01, changes in the fair value of the company's investment in CRISPR were recorded to equity on the company's condensed consolidated balance sheets until the related gains and losses were realized; therefore, there was no comparable income in the three and nine months ended September 30, 2017.

Note 5: The company continues to maintain a valuation allowance on the majority of its net operating losses and other deferred tax assets. Due to this valuation allowance, the company did not record a significant provision for income taxes in the three and nine months ended September 30, 2018 and 2017. The company is profitable from a U.S. federal income tax perspective and has used a portion of its net operating losses to offset this income since becoming profitable. The company may release all or a portion of the valuation allowance in the near-term; however, the release of the valuation allowance, as well as the exact timing and amount of such release, continue to be subject to, among other things, the company's level of profitability, revenue growth, clinical program progression and expectations regarding future profitability. In the period of the release of the valuation allowance, the company will recognize a significant non-cash credit to net income and will reflect a deferred tax asset, which is currently subject to the valuation allowance, on its condensed consolidated balance sheet. Following the release, the company expects to continue to utilize its net operating losses to offset income, but would begin recording a provision for income taxes reflecting the utilization of the deferred tax assets. As of December 31, 2017, the company's U.S. federal net operating loss carry forwards totaled approximately $3.6 billion and its total deferred tax asset balance subject to the valuation allowance was approximately $1.6 billion.

Note 6: In the three and nine months ended September 30, 2018 and 2017, "Collaborative and transaction revenues and expenses" primarily consisted of (i) revenues and operating costs and expenses attributable to BioAxone and Parion, (ii) changes in the fair value of contingent milestone payments and royalties payable by Vertex to BioAxone and Parion, and (iii) collaboration revenues and payments. "Collaborative and transaction revenues and expenses" in the nine months ended September 30, 2018 primarily included a $23.1 million increase in the fair value of contingent payments payable by Vertex to BioAxone. "Collaborative and transaction revenues and expenses" in the three and nine months ended September 30, 2017 primarily related to (i) the $160.0 million Concert payment described in Note 1, (ii) net credits of $3.7 million and $237.2 million, respectively, associated with the company's oncology program, which included the $230.0 million upfront payment described in Note 1 in the nine months ended September 30, 2017, and (iii) a loss of $7.1 million related to the deconsolidation of Parion noted in Note 3.

Note 7: In the three and nine months ended September 30, 2018, "Other adjustments" primarily consisted of the changes in the fair value of the company's investment in CRISPR Therapeutics AG described in Note 4. In the three and nine months ended September 30, 2017, "Other adjustments" primarily consisted of restructuring charges related to the company's decision to consolidate its research activities into its Boston, Milton Park and San Diego locations and to close its research site in Canada.

Note 8: In the three and nine months ended September 30, 2018, "Non-operating tax adjustments" included discrete items related to stock-based compensation. On a GAAP basis, the company recorded a provision for income taxes related to stock-based compensation of $3.1 million in the three months ended September 30, 2018 and a net benefit from income taxes related to stock-based compensation of $13.7 million in the nine months ended September 30, 2018. The company expects the net benefit from income taxes for the nine months ended September 30, 2018 to reverse in the fourth quarter of 2018 resulting in no effect on its GAAP annual provision for income taxes. Accordingly, the company is excluding these adjustments from its Non-GAAP measures.

Note 9: In the three and nine months ended September 30, 2018, "Cost of sales" included $1.3 million and $3.3 million, respectively, in stock-based compensation expense. In the three and nine months ended September 30, 2017, "Cost of sales" included $0.7 million and $1.7 million, respectively, in stock-based compensation expense. Beginning with the first quarter of 2018, the company is adjusting for the stock-based compensation expense recorded in "Cost of sales" in its reconciliation of "Non-GAAP net income attributable to Vertex" and "Non-GAAP cost of sales". In its Non-GAAP reconciliation, the company is not adjusting for the stock-based compensation expense recorded in "Cost of sales" for the three and nine months ended September 30, 2017.

Note 10: In the three and nine months ended September 30, 2018, "Estimated income taxes related to non-GAAP adjustments to pre-tax income (loss)" related to BioAxone's income taxes. In the three and nine months ended September 30, 2017, "Estimated income taxes related to non-GAAP adjustments to pre-tax income (loss)" primarily related to the benefit from income taxes recorded as a result of the impairment and subsequent deconsolidation of Parion described in Note 3.

KALYDECO® (ivacaftor) U.S. INDICATION AND IMPORTANT SAFETY INFORMATION

KALYDECO (ivacaftor) is a prescription medicine used for the treatment of cystic fibrosis (CF) in patients age 12 months and older who have at least one mutation in their CF gene that is responsive to KALYDECO. Patients should talk to their doctor to learn if they have an indicated CF gene mutation. It is not known if KALYDECO is safe and effective in children under 12 months of age.

Patients should not take KALYDECO if they are taking certain medicines or herbal supplements such as: the antibiotics rifampin or rifabutin; seizure medications such as phenobarbital, carbamazepine, or phenytoin; or St. John's wort.

Before taking KALYDECO, patients should tell their doctor if they: have liver or kidney problems; drink grapefruit juice, or eat grapefruit or Seville oranges; are pregnant or plan to become pregnant because it is not known if KALYDECO will harm an unborn baby; and are breastfeeding or planning to breastfeed because is not known if KALYDECO passes into breast milk.

KALYDECO may affect the way other medicines work, and other medicines may affect how KALYDECO works. Therefore the dose of KALYDECO may need to be adjusted when taken with certain medications. Patients should especially tell their doctor if they take antifungal medications such as ketoconazole, itraconazole, posaconazole, voriconazole, or fluconazole; or antibiotics such as telithromycin, clarithromycin, or erythromycin.

KALYDECO can cause dizziness in some people who take it. Patients should not drive a car, use machinery, or do anything that needs them to be alert until they know how KALYDECO affects them. **Patients should avoid** food containing grapefruit or Seville oranges while taking KALYDECO.

KALYDECO can cause serious side effects including:

High liver enzymes in the blood have been reported in patients receiving KALYDECO. The patient's doctor will do blood tests to check their liver before starting KALYDECO, every 3 months during the first year of taking KALYDECO, and every year while taking KALYDECO. For patients who have had high liver enzymes in the past, the doctor may do blood tests to check the liver more often. Patients should call their doctor right away if they have any of the following symptoms of liver problems: pain or discomfort in the upper right stomach (abdominal) area; yellowing of their skin or the white part of their eyes; loss of appetite; nausea or vomiting; or dark, amber-colored urine.

Abnormality of the eye lens (cataract) has been noted in some children and adolescents receiving KALYDECO. The patient's doctor should perform eye examinations prior to and during treatment with KALYDECO to look for cataracts. The most common side effects include headache; upper respiratory tract infection (common cold), which includes sore throat, nasal or sinus congestion, and runny nose; stomach (abdominal) pain; diarrhea; rash; nausea; and dizziness.

These are not all the possible side effects of KALYDECO.

Please click here to see the full U.S. Prescribing Information for KALYDECO.

INDICATION AND IMPORTANT SAFETY INFORMATION FOR ORKAMBI® (lumacaftor/ivacaftor)

ORKAMBI is a prescription medicine used for the treatment of cystic fibrosis (CF) in patients age 2 years and older who have two copies of the *F508del* mutation (*F508del/F508del*) in their *CFTR* gene. ORKAMBI should only be used in these patients. It is not known if ORKAMBI is safe and effective in children under 2 years of age.

Patients should not take ORKAMBI if they are taking certain medicines or herbal supplements, such as: the antibiotics rifampin or rifabutin; the seizure medicines phenobarbital, carbamazepine, or phenytoin; the sedatives and anti-anxiety medicines triazolam or midazolam; the immunosuppressant medicines cyclosporine, everolimus, sirolimus, or tacrolimus; or St. John's wort.

Before taking ORKAMBI, patients should tell their doctor about all their medical conditions, including if they: have or have had liver problems; have kidney problems; have had an organ transplant; or are using birth control. Hormonal contraceptives, including oral, injectable, transdermal, or implantable forms should not be used as a method of birth control when taking ORKAMBI. Patients should tell their doctor if they are pregnant or plan to become pregnant (it is unknown if ORKAMBI will harm the unborn baby) or if they are breastfeeding or planning to breastfeed (it is unknown if ORKAMBI passes into breast milk).

ORKAMBI may affect the way other medicines work and other medicines may affect how ORKAMBI works. Therefore, the dose of ORKAMBI or other medicines may need to be adjusted when taken together. Patients should especially tell their doctor if they take: antifungal medicines such as ketoconazole, itraconazole, posaconazole, or voriconazole; or antibiotics such as telithromycin, clarithromycin, or erythromycin.

When taking ORKAMBI, patients should tell their doctor if they stop ORKAMBI for more than 1 week as the doctor may need to change the dose of ORKAMBI or other medicines the patient is taking.

ORKAMBI can cause serious side effects, including:

Worsening of liver function in people with severe liver disease. The worsening of liver function can be serious or cause death. Patients should talk to their doctor if they have been told they have liver disease as their doctor may need to adjust the dose of ORKAMBI.

High liver enzymes in the blood, which can be a sign of liver injury**.** The patient's doctor will do blood tests to check their liver before they start ORKAMBI, every three months during the first year of taking ORKAMBI, and annually thereafter. The patient should call the doctor right away if they have any of the following symptoms of liver problems: pain or discomfort in the upper right stomach (abdominal) area; yellowing of the skin or the white part of the eyes; loss of appetite; nausea or vomiting; dark, amber-colored urine; or confusion.

Breathing problems such as shortness of breath or chest tightness in patients when starting ORKAMBI, especially in patients who have poor lung function. If a patient has poor lung function, their doctor may monitor them more closely when starting ORKAMBI.

An increase in blood pressure in some people receiving ORKAMBI. The patient's doctor should monitor their blood pressure during treatment with ORKAMBI.

Abnormality of the eye lens (cataract) in some children and adolescents receiving ORKAMBI. For children and adolescents, the patient's doctor should perform eye examinations before and during treatment with ORKAMBI to look for cataracts.

The most common side effects of ORKAMBI include: breathing problems, such as shortness of breath and chest tightness; nausea; diarrhea; fatigue; increase in a certain blood enzyme called creatinine phosphokinase; rash; gas; common cold, including sore throat, stuffy or runny nose; flu or flu-like symptoms; and irregular, missed, or abnormal periods (menses) and increase in the amount of menstrual bleeding.

Side effects seen in children are similar to those seen in adults and adolescents. Additional common side effects seen in children include: cough with sputum, stuffy nose, headache, stomach pain, and increase in sputum.

Please click here to see the full Prescribing Information for ORKAMBI.

U.S INDICATION AND IMPORTANT SAFETY INFORMATION FOR SYMDEKO® (tezacaftor/ivacaftor and ivacaftor) tablets

SYMDEKO is a prescription medicine used for the treatment of cystic fibrosis (CF) in patients aged 12 years and older who have two copies of the *F508del* mutation, or who have at least one mutation in the CF gene that is responsive to treatment with SYMDEKO. Patients should talk to their doctor to learn if they have an indicated CF gene mutation. It is not known if SYMDEKO is safe and effective in children under 12 years of age.

Patients should not take SYMDEKO if they take certain medicines or herbal supplements such as: the antibiotics rifampin or rifabutin; seizure medicines such as phenobarbital, carbamazepine, or phenytoin; St. John's wort.

Before taking SYMDEKO, patients should tell their doctor if they: have or have had liver problems; have kidney problems; are pregnant or plan to become pregnant because it is not known if SYMDEKO will harm an unborn baby; are breastfeeding or planning to breastfeed because it is not known if SYMDEKO passes into breast milk.

SYMDEKO may affect the way other medicines work, and other medicines may affect how SYMDEKO works. Therefore, the dose of SYMDEKO may need to be adjusted when taken with certain medicines. Patients should especially tell their doctor if they take antifungal medicines such as ketoconazole, itraconazole, posaconazole, voriconazole, or fluconazole; or antibiotics such as telithromycin, clarithromycin, or erythromycin.

SYMDEKO may cause dizziness in some people who take it. Patients should not drive a car, use machinery, or do anything that requires alertness until they know how SYMDEKO affects them.

Patients should avoid food or drink that contains grapefruit or Seville oranges while they are taking SYMDEKO.

SYMDEKO can cause serious side effects, including:

High liver enzymes in the blood, which have been reported in people treated with SYMDEKO or treated with ivacaftor alone. The patient's doctor will do blood tests to check their liver before they start SYMDEKO, every 3 months during the first year of taking SYMDEKO, and every year while taking SYMDEKO. Patients should call their doctor right away if they have any of the following symptoms of liver problems: pain or discomfort in the upper right stomach (abdominal) area; yellowing of the skin or the white part of the eyes; loss of appetite; nausea or vomiting; dark, amber-colored urine.

Abnormality of the eye lens (cataract) in some children and adolescents treated with SYMDEKO or with ivacaftor alone. If the patient is a child or adolescent, their doctor should perform eye examinations before and during treatment with SYMDEKO to look for cataracts.

The most common side effects of SYMDEKO include headache, nausea, sinus congestion, and dizziness.

These are not all the possible side effects of SYMDEKO.

Please click here to see the full U.S. Prescribing Information for SYMDEKO.

About Vertex

Vertex is a global biotechnology company that invests in scientific innovation to create transformative medicines for people with serious and life-threatening diseases. In addition to clinical development programs in CF, Vertex has more than a dozen ongoing research programs focused on the underlying mechanisms of other serious diseases.

Founded in 1989 in Cambridge, Mass., Vertex's headquarters is now located in Boston'sInnovation District. Today, the company has research and development sites and commercial offices in the United States, Europe, Canada and Australia. Vertex is consistently recognized as one of the industry's top places to work, including being named to *Science* magazine's Top Employers in the life sciences ranking for eight years in a row.

For additional information and the latest updates from the company, please visit www.vrtx.com.

Special Note Regarding Forward-Looking Statements

This press release contains forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995, including, without limitation, Dr. Leiden's and Mr. Smith's statements in this press release, the information provided in the section captioned "2018 Financial Guidance" and statements regarding (i) the timing and expected outcome of regulatory applications, including NDAs and MAAs and (ii) the development plan and timelines for our product development candidates, including tezacaftor in combination with ivacaftor, our next-generation triple combination regimens, CTX001, VX-150 and the company's AAT correctors. While Vertex believes the forward-looking statements contained in this press release are accurate, these forward-looking statements represent the company's beliefs only as of the date of this press release and there are a number of factors that could cause actual events or results to differ materially from those indicated by such forward-looking statements. Those risks and uncertainties include, among other things, that the company's expectations regarding its 2018 CF net product revenues and expenses may be incorrect (including because one or more of the company's assumptions underlying its expectations may not be realized), that data from the company's development programs may not support registration or further development of its compounds due to safety, efficacy or other reasons, and other risks listed under Risk Factors in Vertex's annual report and quarterly reports filed with the Securities and Exchange Commission and available through the company's website at www.vrtx.com. Vertex disclaims any obligation to update the information contained in this press release as new information becomes available.

Conference Call and Webcast

The company will host a conference call and webcast today at 4:30 p.m. ET. To access the call, please dial (866) 501-1537 (U.S.) or +1 (720) 545-0001 (International). The conference call will be webcast live and a link to the webcast can be accessed through Vertex's website at www.vrtx.com in the "Investors" section under "Events and Presentations." To ensure a timely connection, it is recommended that users register at least 15 minutes prior to the scheduled webcast. An archived webcast will be available on the company's website.

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