

VERTEX PHARMACEUTICALS INC / MA

FORM 10-K (Annual Report)

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

FORM 10-K

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

For the Fiscal Year Ended December 31, 2011

or

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

For the transition period from _____ to _____

Commission file number 000-19319

Vertex Pharmaceuticals Incorporated

(Exact name of registrant as specified in its charter)

Massachusetts
(State or other jurisdiction of
incorporation or organization)

04-3039129
(I.R.S. Employer
Identification No.)

130 Waverly Street, Cambridge, Massachusetts
(Address of principal executive offices)

02139-4242
(Zip Code)

Registrant's telephone number, including area code **(617) 444-6100**

Securities registered pursuant to Section 12(b) of the Exchange Act:

<u>Title of Each Class</u>	<u>Name of Each Exchange on Which Registered</u>
Common Stock, \$0.01 Par Value Per Share	The NASDAQ Global Select Market

Securities registered pursuant to Section 12(g) of the Exchange Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes
No

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer
(Do not check if a smaller
reporting company)

Smaller reporting company

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

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant (without admitting that any person whose shares are not included in such calculation is an affiliate) based on the last reported sale price of the common stock on June 30, 2011 (the last trading day of the registrant's second fiscal quarter of 2011) was \$10.7 billion. As of February 8, 2012, the registrant had 210,335,993 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement for the 2012 Annual Meeting of Shareholders to be held on May 16, 2012 are incorporated by reference into Part III of this Annual Report on Form 10-K.

VERTEX PHARMACEUTICALS INCORPORATED

ANNUAL REPORT ON FORM 10-K

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"We," "us," "Vertex" and the "Company" as used in this Annual Report on Form 10-K refer to Vertex Pharmaceuticals Incorporated, a Massachusetts corporation, and its subsidiaries.

"Vertex," "INCIVEK" and "KALYDECO" are registered trademarks of Vertex. Other brands, names and trademarks contained in this Annual Report on Form 10-K, including "INCIVO" and "TELAVIC," are the property of their respective owners.

PART I

ITEM 1. BUSINESS

OVERVIEW

We are in the business of discovering, developing, manufacturing and commercializing small molecule drugs for the treatment of serious diseases. Our two products are INCIVEK™ (telaprevir), which is approved for the treatment of patients with genotype 1 hepatitis C virus, or HCV, infection, and KALYDECO™ (ivacaftor), which is approved in the United States for the treatment of patients six years of age and older with cystic fibrosis, or CF, who have at least one copy of the G551D mutation in the cystic fibrosis transmembrane conductance regulator, or *CFTR*, gene. We have ongoing clinical programs involving drug candidates intended for the treatment of HCV infection, CF, rheumatoid arthritis, influenza and epilepsy. Our HCV clinical programs are focused on developing all-oral, interferon-free combinations of HCV drugs and drug candidates that have the potential to further improve treatment options available to patients with HCV infection. In our CF program, we are investigating the use of ivacaftor as a monotherapy in additional populations of patients with CF and combinations of ivacaftor and our other CF drug candidates, with the goal of expanding the group of patients with CF who can benefit from our medicines. We believe that our longer-term success will depend on our ability to continue to generate and develop innovative medicines for the treatment of serious diseases. As a result, we expect to continue investing in research programs directed toward the identification of new drug candidates and to develop and commercialize selected drug candidates that emerge from those programs, alone or with third-party collaborators.

OUR PRODUCTS

<u>Product</u>	<u>Indication</u>	<u>Mechanism</u>	<u>Marketed</u>	<u>Marketing Rights</u>
INCIVEK (telaprevir)	Genotype 1 HCV Infection	HCV Protease Inhibitor	United States and Canada	Vertex
KALYDECO (ivacaftor)	CF (G551D mutation)	CFTR Potentiator	United States	Vertex
INCIVO (telaprevir)	Genotype 1 HCV Infection	HCV Protease Inhibitor	United Kingdom, Germany, France, Sweden, Austria, Finland, Denmark, Switzerland and Norway	Janssen
TELAVIC (telaprevir)	Genotype 1 HCV Infection	HCV Protease Inhibitor	Japan	Mitsubishi Tanabe

INCIVEK (telaprevir) is an orally-administered HCV protease inhibitor for adults with genotype 1 HCV infection that is prescribed in combination with pegylated-interferon, or peg-IFN, and ribavirin, or RBV. INCIVEK was approved by the United States Food and Drug Administration, or FDA, in May 2011 and was approved by Health Canada in August 2011. In September 2011, our collaborators, Janssen Pharmaceutica, N.V., or Janssen, a Johnson & Johnson company, and Mitsubishi Tanabe Pharma Corporation, or Mitsubishi Tanabe, obtained marketing approval for telaprevir from the European Commission and the Japanese Ministry of Health, Labor and Welfare, respectively. Janssen markets telaprevir under the brand name INCIVO™ in Europe. Mitsubishi Tanabe markets telaprevir under the brand name TELAVIC™ in Japan.

KALYDECO (ivacaftor) is an orally-administered CFTR potentiator that is approved in the United States for the treatment of patients six years of age and older with CF who have at least one copy of the G551D mutation in the *CFTR* gene. KALYDECO, which was referred to during development as VX-770, was approved by the FDA in January 2012. In October 2011, we submitted a Marketing Authorization Application, or MAA, for ivacaftor (VX-770) to the European Medicines Agency, or EMA. Our MAA for ivacaftor has been validated by the EMA, and the EMA has granted our request for accelerated assessment, which applies to new medicines of major public health interest and shortens

the EMA's review time. We also plan to seek approval for ivacaftor in a number of other countries, including Canada and Australia. We expect to obtain approval to market ivacaftor in the European Union later in 2012.

OUR DRUG CANDIDATES

<u>Drug Candidate</u>	<u>Indication</u>	<u>Mechanism</u>	<u>Development Stage</u>	<u>Marketing Rights</u>
HCV Infection				
VX-222	HCV Infection	Non-nucleoside HCV Polymerase Inhibitor	Phase 2	Vertex
ALS-2158	HCV Infection	HCV Nucleotide Analogue	Phase 1	Vertex
ALS-2200	HCV Infection	HCV Nucleotide Analogue	Phase 1	Vertex
Cystic Fibrosis				
VX-809	Cystic Fibrosis	CFTR Corrector	Phase 2	Vertex
VX-661	Cystic Fibrosis	CFTR Corrector	Phase 2	Vertex
Immune-mediated Inflammatory Diseases				
VX-509	Rheumatoid Arthritis	JAK3 Inhibitor	Phase 2	Vertex
Epilepsy				
VX-765	Epilepsy	ICE Inhibitor	Phase 2	Vertex
Influenza				
VX-787	Influenza A Infection	Influenza Virus Inhibitor	Phase 1	Vertex

OUR STRATEGY

Our goal is to operate as a global biopharmaceutical company with industry-leading capabilities in the research, development, manufacture and commercialization of innovative drugs that provide substantial benefits to patients with serious diseases. The key elements of our strategy are:

Commercialize our products and expand our international capabilities. INCIVEK (telaprevir) achieved initial commercial acceptance following its approval in May 2011, allowing us to begin operating as a cashflow positive company in the second half of 2011. We also started marketing KALYDECO in the United States in January 2012, which will provide us an additional source of revenues. In addition to the establishment of our North American commercial organization, we have expanded our international operations in order to support the potential commercialization of KALYDECO in Europe if it is approved by the European Commission. We believe that we will be able to leverage the experience we gained in the late-stage development and the commercialization of INCIVEK and KALYDECO and our expanded international operations in connection with the development and potential commercialization of our drug candidates.

Advance clinical development programs that have the potential to address significant unmet medical needs. We plan to evaluate a number of drug candidates in mid-stage clinical trials in 2012, including potential all-oral, interferon-free treatment regimens for HCV infection, ivacaftor monotherapy and combination regimens that potentially could benefit a broader group of patients with CF, and VX-509 for the treatment of patients with rheumatoid arthritis and other immune-mediated inflammatory diseases. We believe these, and our other clinical development programs, have the potential to provide additional revenues to us in the future.

Invest in research and early-stage drug candidates. We believe that our long-term success depends on our ability to continue to generate and develop innovative compounds. We intend to continue to invest significant resources in research programs and early-stage drug candidates in an effort to identify and advance additional compounds that have the potential to address significant unmet medical needs.

Complement our internal efforts with external assets, technologies and capabilities. Our business development activities have provided us with drug candidates and/or important financial and non-financial resources that have contributed to our products and a number of the drug candidates in our current development pipeline. We will continue to seek to license or acquire drugs, drug candidates and other technologies that have the potential to add to our pipeline or to provide us with new commercial opportunities. Furthermore, we may seek collaborators to support, develop and/or commercialize some of our drug candidates.

HCV INFECTION

Background: Effects and Prevalence of HCV Infection

Exposure to HCV often leads to chronic infection, although patients frequently do not have symptoms and are unaware that they have become infected with HCV. Over time, liver inflammation develops in many patients. This inflammation can progress to scarring of the liver, called fibrosis, or more advanced scarring of the liver, called cirrhosis. Patients with cirrhosis may go on to develop liver failure or other complications, including liver cancer. The World Health Organization, or WHO, has reported that HCV infection is responsible for more than 50% of all liver cancer cases and two-thirds of all liver transplants in the developed world.

The WHO has estimated that about 170 million people are chronically infected with HCV worldwide and that an additional 3 million to 4 million people are newly infected each year. The Centers for Disease Control and Prevention, or CDC, have estimated that approximately 3.2 million people in the United States are chronically infected with HCV. The Institute of Medicine has estimated the infected population in the United States to be between 2.7 million and 3.9 million people. We believe that approximately 2.6 million patients in the United States have genotype 1 HCV infection.

Telaprevir (INCIVEK in the United States and Canada, INCIVO in the European Union and TELAVIC in Japan)

Telaprevir is an orally-administered HCV protease inhibitor that is indicated for the treatment of treatment-naïve and treatment-failure adults with genotype 1 HCV infection. We market telaprevir in the United States and Canada under the brand name INCIVEK, Janssen markets telaprevir under the brand name INCIVO in the United Kingdom, Germany, France, Sweden, Austria, Finland, Denmark, Switzerland and Norway, and Mitsubishi Tanabe markets telaprevir under the brand name TELAVIC in Japan. Telaprevir was discovered in our collaboration, now ended, with Eli Lilly and Company, and we pay Eli Lilly and Company royalties on net sales of telaprevir.

Patients who are prescribed a telaprevir-based treatment regimen receive telaprevir, peg-IFN and RBV for 12 weeks. After the first 12 weeks, patients stop receiving telaprevir and continue treatment with peg-IFN and RBV alone for an additional 12 weeks or 36 weeks of treatment. Peg-IFN is a medicine that is administered weekly by injection. Telaprevir is indicated for three-times-daily dosing and is being evaluated in a fully-enrolled Phase 3b clinical trial designed to support a supplemental New Drug Application, or sNDA, for twice-daily dosing, and comparable applications in the European Union.

We are conducting Phase 3b clinical trials to evaluate telaprevir-based combination regimens as treatments for genotype 1 HCV infection in patients who also have HIV infection and in patients who experience recurrent genotype 1 HCV infection following a liver transplant. In addition, we are evaluating a 12-week telaprevir-based combination regimen in a Phase 3 clinical trial in patients with genotype 1 HCV who have a specific variant in the patient's *IL-28B* gene, which is referred to as the CC variant, and which is associated with increased efficacy of interferon-based therapy. In this clinical trial, patients who meet certain response criteria will stop all treatment and be evaluated for efficacy

after receiving the initial 12 weeks of telaprevir in combination with peg-IFN and RBV. Approximately one-third of patients with genotype 1 HCV infection have the CC variant in the patient's *IL-28B* gene.

HCV Drug Candidates

Our goal is to further improve treatment options available to patients with HCV infection by developing all-oral, interferon-free treatment regimens for HCV infection. Our HCV drug candidates, VX-222, ALS-2200 and ALS-2158, are designed to inhibit the replication of HCV by inhibiting the HCV NS5b polymerase enzyme. We are evaluating VX-222 in combination with telaprevir and RBV and plan to evaluate multiple combination regimens that incorporate our other HCV drug candidates.

Non-nucleoside HCV polymerase inhibitors, such as our investigational drug candidate VX-222, bind to the NS5b polymerase enzyme, changing its shape and inhibiting its enzymatic activity. HCV nucleotide analogues, such as our investigational drug candidates ALS-2200 and ALS-2158, also act on the HCV NS5b polymerase enzyme, but through mechanisms of action distinct from non-nucleoside HCV polymerase inhibitors. The separate mechanisms of action utilized by each of our HCV drug candidates and telaprevir support the possibility of developing all-oral treatment regimens for HCV infection involving multiple drugs and drug candidates, including dual nucleotide (adenosine and uracil analogue) treatment regimens.

VX-222 is being evaluated in a Phase 2 clinical trial referred to as ZENITH. ZENITH is designed to evaluate combination treatment regimens of telaprevir, VX-222 and RBV, with and without peg-IFN. The primary endpoint of this trial is safety and tolerability, and secondary endpoints are on-treatment antiviral activity and the proportion of people in each treatment arm who achieve a sustained viral response, which is defined in ZENITH as undetectable HCV RNA levels 12 weeks after completion of treatment, or SVR12. We have completed dosing in two, all-oral three-drug treatment arms of ZENITH in which treatment-naïve patients with genotype 1a HCV infection and genotype 1b HCV infection received VX-222 in combination with telaprevir and RBV. We expect to announce interim data, including the percentage of patients with undetectable HCV RNA levels 4 weeks after completion of treatment, from these two all-oral drug treatment arms in the first quarter of 2012.

In ZENITH, we also evaluated two dose levels of VX-222 in combination with telaprevir, RBV and peg-IFN in two treatment arms that enrolled a total of 59 patients with genotype 1 HCV infection. In these two treatment arms, 90% and 83%, respectively, of patients achieved a sustained viral response. At the higher dose level, 50% of patients completed all treatment after 12 weeks, while the other patients continued receiving peg-IFN and RBV for 12 weeks after receiving the four-drug combination for the initial 12-week period. The most frequent adverse events observed in these treatment arms were fatigue, nausea, diarrhea, anemia, pruritis, insomnia and rash. Three patients in each study arm discontinued treatment before week 12 and one patient in each arm discontinued treatment between weeks 12 and 24 while they were receiving peg-IFN and RBV alone.

In December 2011, our collaborator, Alios BioPharma, Inc., or Alios, and we initiated Phase 1 clinical trials to evaluate the safety and tolerability of single ascending doses of each of ALS-2200 and ALS-2158 taken alone in healthy volunteers, and of multiple ascending doses of each of ALS-2200 and ALS-2158 taken alone in patients with genotype 1 HCV. A secondary objective of these clinical trials is to evaluate the viral kinetics of ALS-2200 and ALS-2158 taken alone during seven days of dosing in patients with genotype 1 HCV infection. We expect to obtain the first data from these clinical trials in patients with genotype 1 HCV infection in the second quarter of 2012. Following these clinical trials, we plan to conduct Phase 2a clinical trials evaluating multiple all-oral combination HCV treatment regimens in the second half of 2012. These potential all-oral combinations include combinations of ALS-2200 or ALS-2158 with telaprevir or VX-222, potential dual regimens of ALS-2200 and ALS-2158 together, and other all-oral, interferon-free combinations that include RBV.

CYSTIC FIBROSIS

Background: Effects and Prevalence of Cystic Fibrosis

The underlying cause of CF is a genetically inherited deficiency in the production or activity of the CFTR protein, which is involved in controlling the movement of chloride ions into and/or out of cells in the lungs, sweat glands, pancreas and other organs. While CF is a systemic disease, progressive loss of lung function is the primary cause of increased mortality in patients with CF. Abnormally thick mucus in the lungs of patients with CF leads to chronic lung infections, lung inflammation and progressive decline in lung function.

CF occurs when neither of the two copies of the *CFTR* gene, referred to as alleles, produce sufficient functional CFTR protein. There are a variety of mutations in the *CFTR* gene that result in CF, including two of the most prevalent mutations in the *CFTR* gene, the G551D mutation and the F508del mutation. The G551D mutation results in a defect known as a gating defect, in which the CFTR protein reaches the cell surface but does not efficiently transport chloride ions across the cell membrane. The F508del mutation results in a defect known as a trafficking defect, in which the CFTR protein does not reach the cell surface in sufficient quantities. There are many additional mutations in the *CFTR* gene that result in CF, including other mutations that result in gating or trafficking defects.

KALYDECO and our CF drug candidates were selected because of their potential to improve the function of defective CFTR proteins in patients with CF. We discovered KALYDECO, VX-809 and VX-661 in our research collaboration with the Cystic Fibrosis Foundation Therapeutics Incorporated, or CFFT. We hold worldwide development and commercialization rights to KALYDECO, VX-809 and VX-661. We pay royalties to CFFT on net sales of KALYDECO and will pay royalties to CFFT on any net sales of VX-809 or VX-661, if they are approved.

It is estimated that CF affects about 30,000 people in the United States and 40,000 people in Europe. According to the 2010 Cystic Fibrosis Foundation Patient Registry Annual Data Report in the United States, approximately 4% of patients with CF have the G551D mutation on at least one allele, approximately 48% of patients with CF have the F508del mutation on both alleles and an additional approximately 40% of patients with CF have the F508del mutation on one allele. In Europe, we believe approximately 2.5% of patients with CF have the G551D mutation on at least one allele and approximately 40% of patients with CF have the F508del mutation on both alleles.

KALYDECO (ivacaftor/VX-770)

KALYDECO (ivacaftor) is an orally-administered CFTR potentiator approved in January 2012 in the United States for the treatment of patients six years of age and older with CF who have the G551D mutation on at least one allele. In October 2011, we submitted an MAA for ivacaftor (VX-770) with the EMA. We are seeking approval from the European Commission to market ivacaftor for the treatment of patients with CF six years of age and older with the G551D mutation in the *CFTR* gene and with certain other mutations in the *CFTR* gene that result in gating defects. Our MAA for ivacaftor has been validated by the EMA. The EMA also has granted our request for accelerated assessment, which applies to new medicines of major public health interest and shortens the EMA's review time. We also plan to seek approval for ivacaftor in a number of other countries, including Canada and Australia. We believe that the European Commission could approve ivacaftor in the third quarter of 2012.

In mid-2012, we plan to initiate additional clinical trials to evaluate KALYDECO as a monotherapy for younger patients with CF who have gating mutations, including the G551D mutation on at least one allele, and in patients that have other mutations in the *CFTR* gene where there is the potential for KALYDECO to be administered as a monotherapy. In the first of these trials, KALYDECO will be evaluated in children ages two through five years with gating mutations in the

CFTR gene, including the G551D mutation. In this clinical trial, we expect to evaluate the safety, tolerability and effect on sweat chloride levels as well as other measures of clinical activity using a pediatric formulation of KALYDECO. In the second of these clinical trials, KALYDECO will be evaluated in patients six years of age or older with CF with gating mutations other than the G551D mutation. These remaining gating mutations account for approximately 1% of patients with CF in the United States. In the third of these clinical trials, KALYDECO will be evaluated in patients six years of age or older with CF with the R117H mutation in the *CFTR* gene on at least one allele. The R117H mutation is a mutation that causes abnormal function of the CFTR protein on the cell surface and is present in approximately 3% of patients with CF in the United States.

KALYDECO (ivacaftor) was granted orphan drug status in the United States and the European Union. We are entitled to orphan drug exclusivity for KALYDECO in the United States, which means that the FDA may not approve other applications to market ivacaftor for the same indication for seven years except in very limited circumstances. We have a U.S. patent that covers the composition-of-matter of KALYDECO that expires in 2027 and that we expect will provide intellectual property protection in the United States through its expiration date. As a result of the seven-year orphan drug marketing exclusivity period, even if a competitor successfully challenges the KALYDECO patent it would not obtain approval from the FDA to market ivacaftor in the United States for at least seven years from the date of approval of KALYDECO. For more information regarding orphan drugs, see " *Orphan Drug Designation* " below.

CF Drug Candidates

We are investigating treatment regimens combining KALYDECO with our investigational correctors VX-809 and VX-661. We believe these regimens potentially could be used to treat patients with CF with mutations in the *CFTR* gene other than the G551D mutation, including patients with the F508del mutation, who represent the majority of patients with CF. VX-809 and VX-661 are oral CFTR corrector compounds that were selected because of their potential to increase the concentration of CFTR proteins on cell surfaces in patients with the F508del mutation in the *CFTR* gene. *In vitro* , studies of CFTR corrector and potentiator compounds have suggested that these compounds can partially restore function of defective F508del CFTR protein, with increased trafficking of F508del CFTR protein to the cell surface.

We are evaluating VX-809 in combination with ivacaftor in patients with CF who have the F508del mutation in the *CFTR* gene. In the second quarter of 2011, we obtained interim data from Part 1 of a Phase 2 clinical trial designed to evaluate multiple combination regimens of ivacaftor and VX-809, which enrolled 62 patients with CF with the F508del mutation on both alleles. Part 1 of the clinical trial evaluated a 200 mg dose of VX-809, or placebo, alone for 14 days and then in combination with two doses of ivacaftor, or placebo, for 7 days. The interim safety and efficacy data from Part 1 of this clinical trial supported the initiation of Part 2, in which we are evaluating multiple dose levels of VX-809, including doses higher than those evaluated in Part 1 of this clinical trial, in approximately 100 patients with CF who have the F508del mutation on one or both of their alleles. In Part 2, we are evaluating VX-809 alone for 28 days followed by VX-809 in combination with KALYDECO for 28 days compared to placebo. The primary goals of this clinical trial are to evaluate the safety and tolerability of the combination therapy and its effect on CFTR function as measured by sweat chloride levels. Lung function will be measured as a secondary endpoint.

We initiated a Phase 2 clinical trial of VX-661 in the first quarter of 2012. In this clinical trial, we are evaluating VX-661 as both a monotherapy and in combination with ivacaftor in patients with CF who have two copies of the F508del mutation in the *CFTR* gene.

IMMUNE-MEDIATED INFLAMMATORY DISEASES

Background: Effects and Prevalence of Rheumatoid Arthritis

Immune-mediated inflammatory diseases, including rheumatoid arthritis, are characterized by inflammation that is believed to be the result of an incorrectly regulated immune response. Rheumatoid arthritis is a chronic disease that affects 0.5% to 1.0% of the world's population and, according to the CDC, approximately 1.5 million adults in the United States. Rheumatoid arthritis causes destruction of joint cartilage and erosion of adjacent bone, resulting in deformity, loss of function and substantial disability. Many patients with rheumatoid arthritis also eventually require joint replacements. While approved drugs, including oral and injectable disease-modifying antirheumatic drugs, or DMARDs, are effective in a portion of patients with rheumatoid arthritis, a significant portion of patients do not respond adequately to DMARDs or experience a decrease in the effectiveness of DMARDs over time. We are seeking to develop an oral therapy for the treatment of rheumatoid arthritis that could be used alone or in combination with existing DMARDs.

VX-509

VX-509 is an investigational oral drug candidate intended to inhibit Janus kinase 3, or JAK3, which is involved in the modulation of a type of white blood cell, referred to as a lymphocyte, that is central to auto-immune disease pathology. Because of JAK3's role in lymphocyte biology, we believe it is a promising target for the design of immunosuppressant drugs for treatment of a variety of immune-mediated inflammatory diseases, including rheumatoid arthritis. Based on *in vitro* data, VX-509 appears to be a potent and selective inhibitor of JAK3. Pfizer is seeking approval to market its JAK inhibitor, tofacitinib, as treatment for rheumatoid arthritis based on a Phase 3 clinical program it completed in 2011.

In 2011, we completed a Phase 2a clinical trial that evaluated VX-509 in patients with rheumatoid arthritis. This double-blind, randomized, placebo-controlled clinical trial enrolled 204 people with active moderate-to-severe rheumatoid arthritis. We evaluated four dose levels of VX-509, which was given twice daily for 12 weeks. Patients in this clinical trial did not receive methotrexate. We achieved the two primary endpoints in this Phase 2a clinical trial, defined as a statistically significant improvement in the proportion of patients who achieved at least a 20 percent improvement in the signs and symptoms of rheumatoid arthritis, also known as ACR20, and a statistically significant improvement from baseline in Disease Activity Score 28, or DAS28.

The most frequently reported class of adverse event in the VX-509 and placebo arms of this Phase 2a clinical trial was infection. The most common individual adverse events observed in this Phase 2a clinical trial, each of which occurred in approximately 5% or less of patients in the clinical trial, were nausea, headache and increased alanine transaminase, regardless of treatment arm. Five percent of patients discontinued treatment due to adverse events in the placebo group, compared to eight percent of patients in the VX-509 treatment arms.

Based on the safety and efficacy data from this Phase 2a clinical trial, we plan to evaluate VX-509 as part of a six-month Phase 2b clinical trial in patients with rheumatoid arthritis. In this Phase 2b clinical trial, we expect to evaluate once-daily and twice-daily doses of VX-509 in combination with methotrexate. We expect to initiate this clinical trial in the first quarter of 2012 and to enroll approximately 350 patients with active moderate-to-severe rheumatoid arthritis. In addition, we plan to evaluate VX-509 in patients with other immune-mediated inflammatory diseases.

EPILEPSY

Background: Effects and Prevalence of Epilepsy

Epilepsy is a chronic neurological disorder that is defined by recurrent seizures resulting from overactive neurons in the brain. Recent studies suggest that inflammation and overproduction of the cytokine IL-1 β may be associated with the initiation and maintenance of epileptic seizures. While there are a number of approved anticonvulsant medications used to treat patients with epilepsy, a substantial portion of patients are considered to be treatment-resistant because they continue to have seizures while taking approved anti-epileptic drugs.

VX-765

VX-765 is an interleukin-1 converting enzyme, or ICE, inhibitor. VX-765 is designed to inhibit an enzyme that controls the generation of two cytokines, IL-1 β and IL-18, believed to mediate a wide range of immune and inflammatory responses in many cell types. In 2011, we completed a Phase 2a clinical trial of VX-765 that randomized approximately 60 patients with treatment-resistant epilepsy. This clinical trial was designed to evaluate the safety, tolerability and clinical activity of VX-765. The primary endpoints of the trial were safety and tolerability, and the clinical trial showed a similar safety profile for VX-765 as compared to placebo. The efficacy data from this clinical trial supported the initiation of a Phase 2b clinical trial in patients with treatment-resistant epilepsy. We have initiated a Phase 2b clinical trial of VX-765 to evaluate longer dosing of VX-765 in patients with treatment-resistant epilepsy.

INFLUENZA

Background: Effects and Prevalence of Influenza

The CDC has estimated that in the United States more than 200,000 patients with influenza infection are hospitalized annually with respiratory and cardiac-related complications. While the number of influenza related deaths varies significantly depending on the severity of the influenza season, the CDC has estimated the number of influenza related deaths in the United States averages approximately 25,000 per year. In addition to vaccinations designed to prevent the spread of infection, we believe that there is a significant market for antiviral agents that could potentially be used to treat influenza. Currently, neuraminidase inhibitors, oseltamivir (Tamiflu) and zanamivir (Relenza), are the antiviral agents that are used to treat influenza infection, but these drugs must be administered within 24 to 48 hours of initial infection in order to be effective and do not produce responses in a significant portion of patients.

VX-787

VX-787 is an investigational drug candidate intended for the treatment of influenza A, which is typically the predominate strain of influenza and includes H1 (pandemic) and H5 (avian) influenza strains. VX-787 aims to treat influenza A in a way that is distinct from neuraminidase inhibitors. We have begun Phase 1 clinical development of VX-787 and, if the clinical trials in healthy volunteers are successful, we could begin a Phase 2a clinical trial to evaluate VX-787 in healthy volunteers infected with the influenza A virus in the first half of 2012.

COMMERCIAL ORGANIZATION

We have established a commercial organization to support sales of INCIVEK (telaprevir) and KALYDECO (ivacaftor) in North America. Our sales force and managed markets organizations are responsible for promoting our products to health care providers and payors.

Our U.S. sales force includes approximately 150 employees, most of whom are focused on marketing INCIVEK and have experience in marketing drugs for the treatment of infectious diseases. Our HCV sales force focuses its efforts on those physicians in private practice and at major medical centers who write the majority of prescriptions for HCV therapies, as well as the health care professionals who support their practices. We also have a small sales force dedicated to marketing INCIVEK in Canada.

Our United States field-based CF commercial team includes 14 therapeutic specialists who each have prior experience with CF, as well as case managers and a marketing and managed markets organization. We are focusing our CF marketing efforts on a relatively small number of physicians and health care professionals, less than 1,000, who write approximately 80% of the CF prescriptions in the United States. Many of these physicians and health care professionals are located at one of the approximately 110 accredited centers in the United States focused on the treatment of CF. In addition, we are establishing a small commercial organization in Europe to support the potential sale of ivacaftor in Europe if it is approved by the European Commission.

We market our products and educate physicians by calling on individual physicians, advertising, sending direct mail, public relations efforts and other activities. In addition, our government affairs and public policy group advocates for policies that promote life sciences innovation and increase awareness of the diseases on which we are focusing with state and federal legislatures, government agencies and public health officials and other policy-makers.

We also have established programs in the United States that provide our products to qualified uninsured or underinsured patients at no charge or at a reduced charge, based on specific eligibility criteria.

RESEARCH

We believe that our integrated drug design approach has significantly enhanced our ability to discover and develop small molecule drug candidates directed at biologically complex targets associated with serious diseases. Our platform integrates biology, pharmacology, drug metabolism and pharmacokinetics, toxicology, material sciences, biophysics, medicinal chemistry and process chemistry, automation and information technologies in a coordinated fashion throughout the discovery process. We believe that our approach has been validated through our success in moving novel drug candidates into clinical trials and obtaining marketing approvals for INCIVEK and KALYDECO. Currently, the therapeutic areas of highest priority to us from a research perspective are: infectious diseases, including viral infections, such as influenza and bacterial infections; immune-mediated inflammatory diseases and other inflammatory diseases; cancer; neurological diseases and disorders, including pain; and CF. Within each therapeutic area, we focus initially on specific medical or disease indications. Driven by the complexity of the therapeutic areas selected, we are attempting to identify multiple approaches within each indication that, either as a stand-alone therapy or combination therapy, could provide treatment options that are transformational in nature. The objective of this approach is to enable us eventually to provide multiple drugs in each of these therapeutic areas. We select therapeutic areas by mapping our research strengths, including expertise in kinases, proteases and membrane proteins, onto therapeutic areas with high unmet medical need, with an emphasis on indications where based on scientific insights we believe we, independently or in collaboration with other third parties, will be able to discover, develop and commercialize important medicines for serious diseases.

Our past drug discovery efforts have produced a variety of drug candidates that have been commercialized or are in preclinical or clinical development. We believe our ongoing research programs will continue to create value for us by generating new drug candidates in areas of significant unmet medical need. We are engaged in nonclinical activities involving a number of investigational compounds, one or more of which may enter clinical development in 2012.

To augment our internal research programs, we seek to collaborate with leading academic research institutions, government laboratories, foundations and other organizations in order to advance research in our areas of therapeutic interest as well as in areas of basic technological enablement. We have established relationships with organizations and consortia of organizations from around the world with expertise in areas of interest to us, and intend to leverage that experience to further our research efforts.

CORPORATE COLLABORATIONS

We have entered into corporate collaborations with pharmaceutical and other companies and organizations that provide us financial and other resources, including capabilities in research, development, manufacturing, and sales and marketing, and licenses to intellectual property.

Janssen Pharmaceutica, N.V.

In June 2006, we entered into a license, development, manufacturing and commercialization agreement with Janssen. Under the collaboration agreement, we collaborate with Janssen on the development and commercialization of telaprevir. Under the terms of the collaboration agreement, we have exclusive commercial rights to telaprevir in North America and lead the development program for INCIVEK (telaprevir) in North America and the Janssen territories. Janssen has exclusive rights to commercialize INCIVO (telaprevir) outside of North America and the Far East.

Janssen pays us a tiered royalty, averaging in the mid-20% range, subject to adjustment for generic competition, as a percentage of net sales of INCIVO in the Janssen territories. Janssen is responsible for certain third-party royalties in its territories. Pursuant to the collaboration agreement, we received an up-front payment of \$165.0 million and milestone payments of \$350.0 million related to the development and commercialization of INCIVO. We do not expect to receive any further milestone payments pursuant to this collaboration. Janssen was responsible for 50% of drug development costs under the development program for North America and the Janssen territories through approval, and continues to be responsible for 50% of drug development costs related to certain post-approval activities. Janssen is required to use diligent efforts to maximize net sales of telaprevir in its territories through its commercial marketing, pricing and contracting strategies. Each of the parties to the collaboration agreement is responsible for drug supply in their respective territories.

Janssen may terminate the agreement upon the later of (i) one year's advance notice and (ii) such period as may be required to assign and transfer to us specified filings and approvals. The 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 agreement will continue in effect until the expiration of Janssen's royalty obligations, which expire on a country-by-country basis on the later of (a) the last-to-expire patent covering INCIVO and (b) ten years after the first commercial sale in the country. In the European Union, we have a patent covering the composition-of-matter of INCIVO that expires in 2021, and we expect to obtain extensions to the term of this patent through 2026.

Mitsubishi Tanabe Pharma Corporation

We have a collaboration agreement with Mitsubishi Tanabe pursuant to which Mitsubishi Tanabe has a fully-paid license to manufacture and commercialize TELAVIC (telaprevir) to treat HCV infection in Japan and other specified countries in the Far East. This agreement was entered into in 2004 and amended in 2009. Pursuant to this agreement, Mitsubishi Tanabe provided financial and other support for the development and commercialization of telaprevir, made a \$105.0 million payment to us in connection with the 2009 amendment of the collaboration agreement and made a \$65.0 million payment to us in the fourth quarter of 2011 related to the commercialization of TELAVIC in Japan. There are no further milestone payments due to us under this collaboration agreement. Mitsubishi Tanabe is responsible for its own development and manufacturing costs in its territory. Mitsubishi Tanabe may terminate the agreement at any time without cause upon 60 days' prior written notice to us. The 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 agreement will continue in effect until the expiration of the last-to-expire patent covering TELAVIC. In Japan, we have a patent covering the composition-of-matter of TELAVIC that expires in 2021.

Cystic Fibrosis Foundation Therapeutics Incorporated

We began working with CFFT in 1998. We entered into the current collaboration agreement with CFFT in 2004 and amended it several times to support research and development activities related to potentiator compounds and corrector compounds, including KALYDECO (ivacaftor), VX-809 and VX-661. Pursuant to an April 2011 amendment to the collaboration agreement, CFFT agreed to

provide financial support for development activities for VX-661, a corrector compound discovered under the collaboration, and additional research and development activities directed at discovering new corrector compounds. We retain worldwide rights to develop and commercialize KALYDECO, VX-809, VX-661 and any other compounds discovered during the course of the research collaboration with CFRT and will pay to CFRT tiered royalties ranging from single digits to sub-teens, calculated as a percentage of net sales, on KALYDECO, as well as VX-809 and VX-661 and any other compounds discovered during the original research term or the research term that began in 2011. We also are obligated to make two one-time commercial milestone payments upon achievement of certain sales levels for a potentiator compound, including KALYDECO, and two one-time commercial milestone payments upon achievement of certain sales levels for corrector compounds, including VX-809 or VX-661.

For each compound commercialized under this collaboration, we will have royalty obligations to CFRT until the expiration of patents covering that compound. We have patents in the United States and European Union covering the composition-of-matter of KALYDECO that expire in 2027 and 2025, respectively, subject to potential patent life extensions. CFRT may terminate its funding obligations under the collaboration, as amended, in certain circumstances, in which case there will be a proportional reduction in the royalty rates and commercial milestone payments for certain corrector compounds. The collaboration also may be terminated by either party for a material breach by the other, subject to notice and cure provisions.

Alios BioPharma, Inc.

In June 2011, we entered into a license and collaboration agreement with Alios, a privately-held biotechnology company. Pursuant to the agreement, we will collaborate on the research, development and commercialization of two HCV nucleotide analogues discovered by Alios, ALS-2200 and ALS-2158. We are responsible for all costs related to development and commercialization of the compounds, and are providing funding for a research program directed to the discovery of additional HCV nucleotide analogues that act on the HCV polymerase.

Under the terms of the agreement, we received exclusive worldwide development and commercialization rights to ALS-2200 and ALS-2158, and have the option to select additional compounds discovered in the research program. We paid Alios a \$60.0 million up-front payment, and Alios is eligible to receive research and development milestone payments of up to \$715.0 million if two compounds resulting from the collaboration are approved and commercialized. As of December 31, 2011, Alios had earned \$35.0 million of these contingent research and development milestones. Alios also is eligible to receive commercial milestone payments of up to \$750.0 million, as well as tiered royalties on net sales of approved drugs.

We may terminate our agreement with Alios (i) upon 30 days' notice to Alios if we cease development after both ALS-2200 and ALS-2158 have experienced a technical failure and/or (ii) upon 60 days' notice to Alios at any time after we complete specified Phase 2a clinical trials. The agreement also may be terminated by either party for a material breach by the other, and by Alios for our inactivity or if we challenge certain Alios patents, in each case subject to notice and cure provisions. Unless earlier terminated, the agreement will continue in effect until the expiration of our royalty obligations, which expire on a country-by-country basis on the later of (a) the date the last-to-expire patent covering a licensed product expires or (b) ten years after the first commercial sale in the country.

INTELLECTUAL PROPERTY

We actively seek protection for our products and proprietary information by means of United States and foreign patents, trademarks and copyrights, as appropriate. In addition, we rely upon trade

secret protection and contractual arrangements to protect certain of our proprietary information and products. We have patents and pending patent applications that relate to potential drug targets, compounds we are developing to modulate those targets, methods of making or using those compounds and proprietary elements of our drug discovery platform.

Much of our technology and many of our processes depend upon the knowledge, experience and skills of key scientific and technical personnel. To protect our rights to our proprietary know-how and technology, we require all employees, as well as our consultants and advisors when feasible, to enter into confidentiality agreements that require disclosure and assignment to us of ideas, developments, discoveries and inventions made by these employees, consultants and advisors in the course of their service to us.

While we have numerous issued patents and pending patent applications in our patent portfolio, we believe that the patents and patent applications in the United States and the European Union that are the most important to our business are those that claim the composition-of-matter of our drugs and drug candidates that have progressed at least into Phase 2 clinical trials. The following table sets forth the status of the primary patents and patent applications in the United States and the European Union covering the composition-of-matter of these drugs and drug candidates:

<u>Drug/Drug Candidate</u>	<u>Status of United States Patent (Anticipated Expiration, Subject to Potential Extensions)</u>	<u>Status of European Union Patent (Anticipated Expiration, Subject to Potential Extensions)</u>
INCIVEK/INCIVO (telaprevir)	Granted (2025)	Granted (2021)
KALYDECO (ivacaftor)	Granted (2027)	Application Pending (2025)
VX-222	Granted (2027)	Application Pending (2027)
VX-809	Application Pending (2026)	Application Pending (2026)
VX-661	Granted (2027)	Application Pending (2027)
VX-509	Granted (2026)	Application Pending (2025)
VX-765	Granted (2021)	Application Pending (2021)

The United States patent covering the composition-of-matter for INCIVEK (telaprevir) was granted in 2010 with a term that expires in 2025. We do not expect material extensions to the term of the patent covering the composition-of-matter of INCIVEK (telaprevir) in the United States. In the European Union, we expect to obtain extensions to the term of the patent covering the composition-of-matter of INCIVO (telaprevir) and that as a result of these extensions the patent will expire in 2026. We will need to apply separately for the extensions in the European Union on a country-by-country basis.

We hold issued patents and pending patent applications in the United States, and in foreign countries we deem appropriate, claiming intellectual property developed as part of each of our research and development programs. In addition to the composition-of-matter patents and patent applications listed above, our intellectual property holdings include:

- United States and foreign patents and patent applications covering telaprevir, VX-222 and other HCV protease and polymerase inhibitors and the use of these compounds to treat HCV infection.
- United States and foreign patent applications licensed from Alios covering ALS-2200 and ALS-2158 and the use of these compounds to treat HCV infection.
- United States and foreign patent applications covering potentiator compounds and corrector compounds for the CFTR protein, including ivacaftor, VX-809 and VX-661 and many other related compounds, and the use of those potentiators and correctors to treat CF.
- United States and foreign patents and patent applications covering inhibitors of a variety of kinase proteins, including VX-509, a JAK3 inhibitor, and the use of those inhibitors to treat rheumatoid arthritis.

- United States and foreign patents and patent applications covering ICE inhibitors, including VX-765, and the use of VX-765 to treat epilepsy.
- United States and foreign patents and patent applications covering influenza virus inhibitors, including VX-787.
- United States and foreign patent applications covering the manufacture, pharmaceutical compositions, related solid forms, formulations, dosing regimens and methods of use of these compounds, including our two marketed products telaprevir and ivacaftor.

We cannot be certain, however, that issued patents will be enforceable or provide adequate protection or that pending patent applications will result in issued patents.

From time to time we enter into non-exclusive license agreements for proprietary third-party technology used in connection with our research activities. These license agreements typically provide for the payment by us of a license fee, but may also include terms providing for milestone payments or royalties for the development and/or commercialization of our drug products arising from the related research.

MANUFACTURING

Manufacturing Approach and Philosophy

As we market and sell our approved products and advance our drug candidates through clinical development toward commercialization, we continue to build and maintain our supply chain and quality assurance resources. We rely on an international network of third parties, including sole source suppliers of certain components of our products and drug candidates, to manufacture and distribute our products for commercial sale and post-approval clinical trials and to manufacture and distribute our drug candidates for clinical trials. We expect that we will continue for the foreseeable future to rely on third parties to meet our commercial and clinical supply needs.

Our supply chain for sourcing raw materials and manufacturing drug product ready for distribution is a multi-step international endeavor. Third-party contract manufacturers, including some in China, supply us with raw materials, and contract manufacturers in the European Union and the United States convert these raw materials into drug substance, and convert the drug substance into final dosage form. Establishing and managing this global supply chain for each of our drugs and drug candidates requires a significant financial commitment and the creation and maintenance of numerous third-party contractual relationships.

We have developed systems and processes to track, monitor and oversee our third-party manufacturers' activities, including a quality assurance program intended to ensure that our third-party manufacturers comply with current Good Manufacturing Practices, or cGMP. We regularly evaluate the performance of our third-party manufacturers with the objective of confirming their continuing capabilities to meet our needs efficiently and economically. Manufacturing facilities, both foreign and domestic, are subject to inspections by or under the authority of the FDA and other U.S. and foreign government authorities. A failure by any of our third-party manufacturers to pass an inspection could adversely affect our ability to distribute INCIVEK (telaprevir) or KALYDECO (ivacaftor) in a timely manner.

Manufacture of INCIVEK (telaprevir)

We require a supply of INCIVEK for our commercial sales in North America and our clinical trials. We provide a secondary commercial supply source for Janssen through our third-party manufacturers. We also are providing Mitsubishi Tanabe, until April 2012, specified supplies of telaprevir drug substance and drug product intermediate through these third-party manufacturers. We

believe our efforts to establish and maintain relationships with third-party manufacturers and oversee their activities are important to support consistent supply of INCIVEK.

Janssen manufactures INCIVO (telaprevir) for sale in Janssen's territories and serves as a secondary supply source of drug substance and drug product intermediate for us. We believe there are multiple third parties capable of providing most of the materials and services we need in order to manufacture and distribute INCIVEK. It is also possible that supply of materials needed to manufacture INCIVEK that cannot be second-sourced can be managed with inventory planning. If we underestimate demand, our manufacturing capacity through third-party manufacturers may not be sufficient. Also, while we believe we can effectively forecast demand for INCIVEK, we have limited flexibility to adjust our supply in response to changes in demand, due to the significant lead times required to manufacture INCIVEK.

Manufacture of KALYDECO (ivacaftor)

We require a supply of KALYDECO for commercial sale in the United States and for our clinical trials. We also will require a supply of ivacaftor for international sales, if ivacaftor is approved for marketing in countries outside the United States. We obtain KALYDECO to meet our commercial and clinical supply needs through a third-party manufacturing network. Our supply chain for KALYDECO includes several sole source suppliers, and we are in the process of establishing secondary sources for our KALYDECO supply needs.

COMPETITION

The pharmaceutical industry is characterized by extensive research efforts, rapid technological progress and intense competition. There are many public and private companies, including pharmaceutical companies and biotechnology companies, engaged in developing products for the indications our drugs are approved to treat and the therapeutic areas we are targeting with our research and development activities. Many of our competitors have substantially greater financial, technical and human resources than we do. We face competition based on the safety and efficacy of our products, the timing and scope of regulatory approvals, the availability and cost of supply, marketing and sales capabilities, reimbursement coverage, price, patent protection and other factors. Our competitors may develop or commercialize more effective, safer or more affordable products than we are able to develop or commercialize or obtain more effective patent protection. As a result, our competitors may commercialize products more rapidly or effectively than we do, which would adversely affect our competitive position, the likelihood that our drug candidates, if approved, would achieve and maintain market acceptance and our ability to generate meaningful revenues from our products. Future competitive products may render our products, or future products, obsolete or noncompetitive. With respect to all of our drugs and drug candidates, we are aware of existing treatments and numerous drug candidates in development by our competitors.

HCV Infection

Competitive Products

In 2011, our collaborators and we obtained approval to market our HCV protease inhibitor telaprevir for the treatment of treatment-naïve and treatment-experienced adults with genotype 1 HCV infection in the United States, European Union and other international markets. In the United States, we believe over 25,000 patients were treated with INCIVEK in 2011. Merck & Co., Inc.'s HCV protease inhibitor boceprevir, which it markets under the brand name VICTRELIS™, also was approved in the United States, European Union and other international markets in 2011. Prior to the introduction of telaprevir and boceprevir, genotype 1 HCV infection was treated using a 48-week course of peg-IFN, which requires weekly injections, in combination with RBV, which is an oral drug. A

majority of patients with genotype 1 HCV infection did not achieve a sustained viral response with peg-IFN and RBV alone. We believe that prior to the approval of telaprevir, sales of peg-IFN and RBV declined as physicians and patients became aware of promising clinical data regarding potential treatment regimens that include HCV protease inhibitors.

Development-stage Product Candidates

We are aware of a number of clinical trials investigating compounds and all-oral, interferon-free treatment regimens involving multiple drug candidates that target HCV infection through various different mechanisms of action, and we believe that there are many additional potential HCV treatments in research or early development. There are a number of HCV protease inhibitors, HCV nucleotide analogues, non-nucleoside HCV polymerase inhibitors and HCV NS5A inhibitors, each of which is a direct-acting antiviral compound, in mid- and late-stage clinical development. If any of these drug candidates or combinations of drug candidates is approved as a treatment for HCV infection, we expect that it would compete with the INCIVEK (telaprevir)-based regimens containing peg-IFN and RBV, and any of our HCV drug candidates that are approved, on the basis of the factors described above.

We do not expect that additional competitive products for the treatment of HCV infection will enter the market until late 2013 at the soonest. We believe that the most advanced potentially competitive product for the treatment of HCV infection is TMC-435, an HCV protease inhibitor being developed by Tibotec, an affiliate of our collaborator Janssen, and Medivir AB, which entered Phase 3 clinical trials in the first quarter of 2011. Even prior to the introduction of competitive products, however, we believe that information regarding future potential treatments from clinical trials of HCV drug candidates could influence some physicians or patients to defer treatment until these drug candidates or other treatment options become available.

We believe that the most significant future competition in the HCV treatment market will result from all-oral, interferon-free treatment regimens. We are conducting a Phase 2a clinical trial in which we are evaluating an all-oral combination of VX-222, our non-nucleoside HCV polymerase inhibitor, with telaprevir and RBV, and we are evaluating ALS-2158 and ALS-2200, our HCV nucleotide analogues, in Phase 1 clinical trials. We are aware that many competitors, including Abbott Laboratories, Achillion Pharmaceuticals, Inc., Boehringer Ingelheim, Bristol-Myers Squibb Company, Gilead Sciences, Inc., Hoffman-La Roche, Idenix Pharmaceuticals, Inc. and Janssen also are seeking to develop all-oral, interferon-free treatment regimens to treat HCV infection. In particular, Gilead may initiate in 2012 a Phase 3 clinical trial to evaluate GS-7977, an HCV nucleotide analogue, in combination with RBV as a treatment for patients with genotype 1 HCV infection, depending on the data generated in its ongoing Phase 2b clinical trial in this genotype. While it is difficult to predict drug development and regulatory timelines, we believe that one or more all-oral treatment regimens could enter the market as early as 2014 or 2015.

The following table provides information regarding selected drug candidates that are being evaluated for the treatment of HCV infection:

Drug Candidate	Company	Development Phase
HCV Protease Inhibitors		
TMC-435	Janssen/Medivir AB	Phase 3
BI 201335	Boehringer Ingelheim	Phase 3
MK-5172	Merck	Phase 2
GS-9451	Gilead	Phase 2
BMS-650032	Bristol-Myers Squibb	Phase 2
ACH-1625	Achillion	Phase 2
ABT-450	Abbott	Phase 2
Danoprevir / RG7227	Roche	Phase 2
ACH-2684	Achillion	Phase 1
HCV Nucleotide Analogues		
GS-7977	Gilead	Phase 3
INX-189	Bristol-Myers Squibb	Phase 2
IDX184	Idenix	Phase 2
Mercitabine (R7128)	Gilead/Roche	Phase 2
ALS-2200	Vertex/Alios	Phase 1
ALS-2158	Vertex/Alios	Phase 1
Non-nucleoside HCV Polymerase Inhibitors		
VX-222	Vertex	Phase 2
tegobuvir (GS-9190)	Gilead	Phase 2
ABT-333	Abbott	Phase 2
ABT-072	Abbott	Phase 2
Setrobuvir	Roche	Phase 2
BI 207127	Boehringer Ingelheim	Phase 2
HCV NS5a Inhibitors		
GS-5885	Gilead	Phase 2
daclatasvir (BMS-790052)	Bristol-Myers Squibb	Phase 2
ABT-267	Abbott	Phase 2
ACH-2928	Achillion	Phase 1

Cystic Fibrosis

Several companies are engaged in researching and/or developing treatments for CF. PTC Therapeutics, Inc., in collaboration with Genzyme Corporation, a Sanofi company, is evaluating ataluren in a Phase 3 clinical trial in patients with CF. Ataluren is a drug candidate designed to improve the production of CFTR proteins in patients with nonsense mutations in the *CFTR* gene that halt the production of CFTR proteins before the protein is fully formed. We do not believe that there is significant overlap between patients with the G551D mutation in the *CFTR* gene and patients with nonsense mutations in the *CFTR* gene. In addition, several companies, including Genzyme, have research programs directed at identifying CFTR corrector compounds.

GOVERNMENT REGULATION

The research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record keeping, promotion, advertising, distribution and marketing of our products and drug candidates are subject to extensive regulation by United States and foreign governmental authorities.

United States Government Regulation

New Drug Application Approval Processes

In the United States, the FDA regulates drugs under the Federal Food, Drug and Cosmetic Act, or the FDCA, and implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the drug development process, approval process or after approval, may subject us to administrative or judicial sanctions, any of which could have a material adverse effect on us. These sanctions could include:

- refusal to approve pending applications;
- withdrawal of an approval;
- imposition of a clinical hold;
- warning letters;
- product seizures;
- total or partial suspension of production or distribution; or
- injunctions, fines, disgorgement, or civil or criminal penalties.

The process required by the FDA before a drug may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests, animal studies and formulation studies conducted according to Good Laboratory Practices, or GLP, and other applicable regulations;
- submission to the FDA of an investigational new drug, or IND, application, which must become effective before clinical trials in the United States may begin;
- performance of adequate and well-controlled clinical trials according to Good Clinical Practices, or GCP, to establish the safety and efficacy of the proposed drug for its intended use;
- submission to the FDA of a New Drug Application, or NDA;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product will be produced to assess compliance with cGMP to assure that the facilities, methods and controls are adequate to preserve the product's identity, strength, quality and purity; and
- FDA review and approval of the NDA.

Once a drug candidate is identified for development, it enters the preclinical testing stage. Preclinical tests include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal pharmacology and toxicology studies. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information and analytical data, to the FDA as part of the IND. Preclinical or nonclinical testing typically continues even after the IND is submitted. In addition to including the results of the preclinical studies, the IND also will include a protocol detailing, among other things, the objectives of the initial clinical trial and the parameters to be used in monitoring safety. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, places the IND on clinical hold. If an IND is placed on clinical hold, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can begin. A clinical hold may occur at any time during the life of an IND, and may affect one or more specific clinical trials or all clinical trials conducted under the IND.

All clinical trials must be conducted under the supervision of one or more qualified investigators in accordance with GCP. They must be conducted under protocols detailing the objectives of the trial, dosing procedures, subject selection and exclusion criteria and the safety and effectiveness criteria to be evaluated. Each protocol and any amendments must be submitted to the FDA as part of the IND, and progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and more frequently in other situations, including the occurrence of serious adverse events. An institutional review board, or IRB, at each institution participating in the clinical trial must review and approve the protocol and any amendments before a clinical trial commences or continues at that institution, approve the information regarding the clinical trial and the consent form that must be provided to each trial subject or his or her legal representative, and monitor the clinical trial until completed and otherwise comply with IRB regulations.

Clinical trials typically are conducted in three sequential phases that may overlap or be combined:

- *Phase 1.* The drug initially is introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and elimination. In the case of some drug candidates for severe or life-threatening diseases, such as cancer, especially when the drug candidate may be inherently too toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- *Phase 2.* Clinical trials are initiated in a limited patient population intended to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the drug candidate for specific targeted diseases and to determine dosage tolerance and optimal dosage.
- *Phase 3.* Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk-benefit ratio of the drug candidate and provide an adequate basis for regulatory approval and product labeling.

Phase 1, Phase 2, and Phase 3 testing may not be completed successfully within any specified period, if at all. The FDA or the sponsor may suspend a clinical trial at any time for a variety of reasons, including a finding that the healthy volunteers or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug candidate has been associated with unexpected serious harm to healthy volunteers or patients.

We estimate that it generally takes 10 to 15 years, or possibly longer, to discover, develop and bring to market a new pharmaceutical product in the United States, as outlined below:

<u>Phase</u>	<u>Estimated Duration</u>
Discovery	2 to 4 years
Preclinical	1 to 2 years
Phase 1	1 to 2 years
Phase 2	2 to 4 years
Phase 3	2 to 4 years
FDA approval	6 months to 2 years

During the development of a new drug, sponsors are given opportunities to meet with the FDA at certain points. These points may be prior to submission of an IND, at the end of Phase 2, and before an NDA is submitted. Meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice, and for the sponsor and FDA to reach agreement on the next phase of development. Sponsors typically use the end of Phase 2 meeting to discuss their Phase 2 clinical results and present their plans for the pivotal Phase 3 clinical trial that they believe will support approval of the drug candidate.

Concurrently with clinical trials, companies usually complete additional animal safety studies and also must develop additional information about the chemistry and physical characteristics of the drug and finalize a process for manufacturing the product in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the drug candidate, and the manufacturer must develop methods for testing the quality, purity and potency of the final products. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug candidate does not undergo unacceptable deterioration over its shelf-life.

The results of drug development, preclinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling and other relevant information are submitted to the FDA as part of an NDA requesting approval to market the drug candidate. The FDA reviews each NDA submitted to ensure that it is sufficiently complete for substantive review before it accepts it for filing. It may request additional information rather than accept an NDA for filing.

Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA may not approve an NDA if the applicable regulatory criteria are not satisfied or may require additional clinical or other data. Even if such data are submitted, the FDA may ultimately decide that the NDA does not satisfy the criteria for approval. The FDA reviews an NDA to determine, among other things, whether a drug candidate is safe and effective for its intended use and whether its manufacturing is cGMP-compliant to assure and preserve the drug candidate's identity, strength, quality and purity. The FDA may refer the NDA to an advisory committee for review and recommendation as to whether the NDA should be approved and under what conditions. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. Before approving an NDA, the FDA will inspect the facility or facilities where the drug candidate is manufactured and tested.

The FDA may require, as a condition of approval, restricted distribution and use, enhanced labeling, special packaging or labeling, expedited reporting of certain adverse events, pre-approval of promotional materials, restrictions on direct-to-consumer advertising or commitments to conduct additional research post-approval. The FDA will issue a complete response letter if the agency decides not to approve the NDA in its present form. The complete response letter usually describes all of the specific deficiencies in the NDA identified by the FDA. If a complete response letter is issued, the applicant may either resubmit the NDA, addressing all of the deficiencies identified in the letter, or withdraw the application.

Expedited Review and Approval

The FDA has various programs, including Fast Track, priority review, and accelerated approval, that are intended to expedite or simplify the process for reviewing drug candidates, and/or provide for approval on the basis of surrogate endpoints. Even if a drug candidate qualifies for one or more of these programs, the FDA may later decide that the drug candidate no longer meets the conditions for qualification or that the time period for FDA review or approval will not be shortened. Generally, drug candidates that may be eligible for these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs, and those that offer meaningful benefits over existing treatments. For example, Fast Track is a process designed to facilitate the development, and expedite the review of drug candidates to treat serious diseases and fill an unmet medical need. Priority review is designed to give drug candidates that offer major advances in treatment or provide a treatment where no adequate therapy exists an initial review within six months as compared to a standard review time of ten months. Although Fast Track and priority review do not affect the standards for approval, the FDA will attempt to facilitate early and frequent meetings with a sponsor of a Fast Track designated drug candidate and expedite review of the application for a drug candidate designated for priority review. Accelerated approval provides an earlier approval of drugs to treat

serious diseases, and that fill an unmet medical need based on a surrogate endpoint, which is a laboratory measurement or physical sign used as an indirect or substitute measurement representing a clinically meaningful outcome. As a condition of approval, the FDA may require that a sponsor of a product receiving accelerated approval perform post-marketing clinical trials.

Post-approval Requirements

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product may result in restrictions on the product or complete withdrawal of the product from the market. In addition, under the FDCA the sponsor of an approved drug in the United States may not promote that drug for unapproved, or off-label, uses, although a physician may prescribe a drug for an off-label use in accordance with the practice of medicine. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval. In addition, the FDA may require testing and surveillance programs to monitor the effect of approved products that have been commercialized, and the FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs.

Products manufactured or distributed by us pursuant to FDA approvals are subject to continuing regulation by the FDA, including, among other things:

- record-keeping requirements;
- reporting of adverse experiences with the product;
- providing the FDA with updated safety and efficacy information;
- drug sampling and distribution requirements;
- notifying the FDA and gaining its approval of specified manufacturing or labeling changes;
- complying with certain electronic records and signature requirements; and
- complying with FDA promotion and advertising requirements.

Drug manufacturers and other entities involved in the manufacture and distribution of approved products are required to register with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and some state agencies for compliance with cGMP and other laws.

We rely, and expect to continue to rely, on third parties for the production of our products. Future FDA and state inspections may identify compliance issues at the facilities of our contract manufacturers that may disrupt manufacture or distribution of our products, or require substantial resources to correct.

From time to time, new legislation is enacted that changes the statutory provisions governing the approval, manufacturing and marketing of products regulated by the FDA. In addition, FDA regulations and guidance often are revised or reinterpreted by the agency in ways that may significantly affect our business and our products. It is impossible to predict whether legislative changes will be enacted, or FDA regulations, guidance or interpretations changed.

Patent Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of FDA approval of the use of our drugs, some of our United States patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments.

The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND, and the submission date of an NDA, plus the time between the submission date of an NDA and the approval of that application. Only one patent applicable to an approved product is eligible for the extension and the extension must be applied for prior to expiration of the patent. The United States Patent and Trademark Office, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may apply for restorations of patent term for some of our currently owned or licensed patents to add patent life beyond their current expiration date, depending on the expected length of clinical trials and other factors involved in the submission of the relevant NDA.

Market exclusivity provisions under the FDCA also can delay the submission or the approval of certain applications. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to gain approval of an NDA for a new chemical entity. For a new chemical entity that qualifies for Orphan Drug designation, the FDCA provides such marketing exclusivity for a period of seven years. A product is a new chemical entity if the FDA has not previously approved any other new product containing the same active moiety, which is the molecule responsible for the action of the drug substance. During the exclusivity period, the FDA may not accept for review an abbreviated new drug application, or ANDA, or a 505(b)(2) NDA submitted by another company for another version of such product where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement. The FDCA also provides three years of marketing exclusivity for an NDA, 505(b)(2) NDA or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example, for new indications, dosages, or strengths of an existing drug. This three-year exclusivity covers only the conditions associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs for drugs containing the original active agent.

Pediatric Exclusivity

Section 505A of the FDCA, as amended by the FDA Amendments Act of 2007, permits certain drugs to obtain an additional six months of exclusivity, if the sponsor submits information requested in writing by the FDA, or a written request, relating to the use of the drug in children. The FDA may not issue a written request for clinical trials on unapproved or approved indications or where it determines that information relating to the use of a drug in a pediatric population, or part of the pediatric population, may not produce health benefits in that population.

Foreign Regulation

In addition to regulations in the United States, we are subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a drug candidate, we must obtain approval by the comparable regulatory authorities of foreign countries or economic areas, such as the European Union, before we can commence clinical trials or market products in those countries or areas. The approval process and requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from place to place, and the time may be longer or shorter than that required for FDA approval.

Under European Union regulatory systems, a company may submit marketing authorization applications either under a centralized or decentralized procedure. The centralized procedure, which is

compulsory for medicines produced by biotechnology or those medicines intended to treat AIDS, cancer, neurodegenerative disorders, or diabetes and optional for those medicines that are highly innovative, provides for the grant of a single marketing authorization that is valid for all European Union member states. The decentralized procedure provides for approval by one or more "concerned" member states based on an assessment of an application performed by one member state, known as the "reference" member state. Under the decentralized approval procedure, an applicant submits an application, or dossier, and related materials to the reference member state and concerned member states. The reference member state prepares a draft assessment and drafts of the related materials within 120 days after receipt of a valid application. Within 90 days of receiving the reference member state's assessment report, each concerned member state must decide whether or not to approve the assessment report and related materials. If a member state does not recognize the marketing authorization, the disputed points are eventually referred to the European Commission, whose decision is binding on all member states.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drug candidates intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 people in the United States, or more than 200,000 people in the United States and for which there is no reasonable expectation that the cost of developing and making available in the United States a drug for this type of disease or condition will be recovered from sales in the United States for that drug. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process. KALYDECO and VX-809 have been granted designation as orphan drugs by the FDA.

If a drug candidate that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same indication, except in very limited circumstances, for seven years. Orphan drug exclusivity, however, also could block the approval of our drug candidates for seven years if a competitor obtains approval of the same product as defined by the FDA or if our drug candidate is determined to be contained within the competitor's product for the same indication or disease.

As in the United States, we may apply for designation of a drug candidate as an orphan drug for the treatment of a specific indication in the European Union before the application for marketing authorization is made. Orphan drugs in Europe enjoy economic and marketing benefits, including up to 10 years of market exclusivity for the approved indication unless another applicant can show that its product is safer, more effective or otherwise clinically superior to the orphan-designated product.

The FDA and foreign regulators expect holders of exclusivity for orphan drugs, such as KALYDECO, to assure the availability of sufficient quantities of their orphan drugs to meet the needs of patients. Failure to do so could result in the withdrawal of marketing exclusivity for the orphan drug.

Reimbursement

Sales of our products depend, in part, on the extent to which our products will be covered by third-party payors, such as government health programs, commercial insurance and managed health care organizations. These third-party payors increasingly are reducing reimbursements for medical products and services. Additionally, the containment of health care costs has become a priority of federal and state governments, and the prices of drugs have been a focus in this effort. The U.S. government, state legislatures and foreign governments have shown significant interest in implementing

cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could limit our revenues. Decreases in third-party reimbursement for a product or a decision by a third-party payor to not cover a product could reduce physician usage of the product.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities, which will provide coverage of outpatient prescription drugs. Unlike Medicare Part A and B, Part D coverage is not standardized. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for products for which we receive marketing approval. However, any negotiated prices for our products covered by a Part D prescription drug plan likely will be lower than the prices we might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

The American Recovery and Reinvestment Act of 2009 provides funding for the federal government to compare the effectiveness of different treatments for the same illness. A plan for the research will be developed by the Department of Health and Human Services, or HHS, the Agency for Healthcare Research and Quality and the National Institutes for Health, and periodic reports on the status of the research and related expenditures will be made to Congress. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private payors, it is not clear what effect, if any, the research will have on the sales of our products. It is possible that comparative effectiveness research demonstrating benefits of a competitor's product could adversely affect the sales of our products. If third-party payors do not consider our products to be cost-effective compared to other available therapies, they may not cover our products as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act of 2010, which is referred to as the ACA, enacted in March 2010, is expected to have a significant effect on the U.S. health care industry. The ACA is designed to expand coverage for the uninsured while at the same time containing overall health care costs. With regard to pharmaceutical products, among other things, the ACA is designed to expand and increase industry rebates for drugs covered under Medicaid programs, impose an annual fee on branded pharmaceutical manufacturers and make changes to the coverage requirements under the Medicare Part D program. We cannot predict the effect of the ACA on pharmaceutical companies as many of the ACA reforms require the promulgation of detailed regulations implementing the statutory provisions, which has not yet occurred. In addition, the current legal challenges to the ACA, as well as congressional efforts to repeal the ACA, add to the uncertainty of the legislative changes enacted as part of the ACA.

In some foreign countries, the proposed pricing for a drug must be approved before it may be marketed. The requirements governing drug pricing vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of drugs for which their national health insurance systems provide reimbursement and to control the prices of drugs for human use. A member state may approve a specific price for the drug or it may instead adopt a system

of direct or indirect controls on the profitability of the company placing the drug on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the European Union do not follow price structures of the United States and the prices of these products generally tend to be lower.

Other United States Regulations

Pharmaceutical companies also are subject to various federal and state laws pertaining to health care "fraud and abuse," including anti-kickback laws and false claims laws, and the reporting of payments to physicians and teaching hospitals.

Anti-Kickback Laws

U.S. federal laws prohibit fraud and abuse involving state and federal health care programs, such as Medicare and Medicaid. These laws are interpreted broadly and enforced aggressively by various state and federal agencies, including the Centers for Medicare & Medicaid Services, or CMS, the Department of Justice, the Office of Inspector General for the Department of Health and Human Services and various state agencies. These anti-kickback laws prohibit, among other things, knowingly and willfully offering, paying, soliciting, receiving or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual, or the furnishing, arranging for or recommending of an item or service that is reimbursable, in whole or in part, by a federal health care program. Remuneration is broadly defined to include anything of value, such as, cash payments, gifts or gift certificates, discounts, or the furnishing of services, supplies or equipment. The anti-kickback laws are broad and prohibit many arrangements and practices that are lawful in businesses outside of the health care industry.

The penalties for violating the anti-kickback laws can be severe. The sanctions include criminal and civil penalties, and possible exclusion from the federal health care programs. Many states have adopted laws similar to the federal anti-kickback laws, and some apply to items and services reimbursable by any payor, including third-party payors.

State and Federal Prohibitions on False Claims

The federal False Claims Act imposes liability on any person or entity that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment to the federal government. Under the False Claims Act, a person acts knowingly if he has actual knowledge of the information or acts in deliberate ignorance or in reckless disregard of the truth or falsity of the information. Specific intent to defraud is not required. Provisions of the False Claims Act allow a private individual to bring an action on behalf of the federal government and to share in any amounts paid by the defendant to the government in connection with the action. The number of filings under these provisions has increased significantly in recent years. When an entity is determined to have violated the False Claims Act, it may be required to pay up to three times the actual damages sustained by the government, plus civil penalties for each false claim. Conduct that violates the False Claims Act may also lead to exclusion from the federal health care programs. Given the number of claims likely to be at issue, potential damages under the False Claims Act for even a single inappropriate arrangement could be significant. In addition, various states have enacted similar laws modeled after the False Claims Act that apply to items and services reimbursed under Medicaid and other state health care programs, and, in several states, such laws apply to claims submitted to all payors.

Federal Prohibitions on Health Care Fraud and False Statements Related to Health Care Matters

Under the administrative simplification provisions of the Health Insurance Portability and Accountability Act of 1996, or HIPAA, and state laws there are numerous regulations for protecting the privacy and security of protected health information. Additional administrative simplification provisions created the following new federal crimes: health care fraud, false statements relating to health care matters, theft or embezzlement in connection with a health benefit program and obstruction of criminal investigation of health care offenses. The health care fraud statute prohibits knowingly and willfully executing a scheme to defraud any health care benefit program, including a private insurer. The false statements statute prohibits knowingly and willfully falsifying, concealing, or covering up a material fact or making any materially false, fictitious, or fraudulent statement in connection with the delivery of or payment for health care benefits, items, or services. The theft or embezzlement statute prohibits knowingly and willfully embezzling, stealing or otherwise converting or misapplying the money or property of a health care benefit program. The obstruction of criminal investigations of health care offenses statute prohibits willfully preventing, obstructing, misleading or delaying the communication of information and records relating to a violation of a federal health care offense to a criminal investigator. A violation of any of these laws is a felony and may result in fines, or exclusion from the federal health care programs.

Physician Payment Sunshine Act

The Physician Payment Sunshine Act, which was enacted as part of the ACA, requires pharmaceutical manufacturers to report annually to the Secretary of HHS payments or other transfers of value made by that entity to physicians and teaching hospitals during the course of the preceding calendar year. Because CMS was late in publishing the related proposed regulation, the start date for the collection of the data was postponed from January 1, 2012 to sometime after the publication of the final regulation later in 2012. Failure to comply with the reporting requirements would result in significant civil monetary penalties. We will be required to collect and report such payments.

In addition to the statutes and regulations described above, we also are subject to regulation in the United States under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act and other federal, state, local and foreign statutes and regulations, now or hereafter in effect.

EMPLOYEES

As of December 31, 2011, we had approximately 2,000 employees. The number of our employees increased by approximately 18% during 2011, from approximately 1,700 on December 31, 2010. We are likely to further increase our headcount in 2012. Of these employees, approximately 1,800 were based in the United States, 125 were based in Europe and 60 were based in Canada. Our scientific staff members have diversified experience and expertise in molecular and cell biology, biochemistry, synthetic organic chemistry, protein X-ray crystallography, protein nuclear magnetic resonance spectroscopy, microbiology, computational chemistry, biophysical chemistry, medicinal chemistry, clinical pharmacology and clinical medicine. Our clinical development personnel have extensive expertise in designing and executing clinical trials. Employees in our commercial organization have extensive experience in selling and marketing pharmaceutical products as well as seeking reimbursement from government and third-party payors for pharmaceutical products. Our employees are not covered by a collective bargaining agreement, except for a small number of employees in France. Science magazine named Vertex number one on its 2011 list of top employers in the life sciences. We consider our relations with our employees to be good.

OTHER MATTERS

Financial Information Regarding Geographic Areas

Financial information about our net product revenues and other revenues generated in the principal geographic regions in which we operate is set forth in Note W, "Geographic Information," to our consolidated financial statements included in this Annual Report on Form 10-K. A discussion of the risks attendant to our international operations is set forth in the "Risk Factors" section of this Annual Report on Form 10-K.

Information Available on the Internet

Our internet address is www.vrtx.com. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports, are available to you free of charge through the "Finances/Investor Info-SEC Filings" section of our website as soon as reasonably practicable after those materials have been electronically filed with, or furnished to, the Securities and Exchange Commission.

Corporate Information

Vertex was incorporated in Massachusetts in 1989, and our principal executive offices are located at 130 Waverly Street, Cambridge, Massachusetts 02139. We have research sites located in San Diego, California; Coralville, Iowa; Montreal, Canada and Milton Park, U.K. We also have an office in Washington, D.C. We have established our European headquarters in Switzerland and are building out our European commercial organization in France, Germany, Ireland and the United Kingdom.

EXECUTIVE OFFICERS AND DIRECTORS

The names, ages and positions held by our executive officers and directors are as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Matthew W. Emmens	60	Executive Chairman and Chairman of the Board
Jeffrey M. Leiden, M.D., Ph.D.	56	Chief Executive Officer, President and Director
Peter Mueller, Ph.D.	55	Executive Vice President, Global Research and Development, and Chief Scientific Officer
Ian F. Smith	46	Executive Vice President and Chief Financial Officer
Nancy J. Wysenski, M.B.A.	54	Executive Vice President and Chief Commercial Officer
David T. Howton, J.D.	40	Senior Vice President and Chief Legal Officer
Lisa Kelly-Croswell	45	Senior Vice President, Human Resources
Amit K. Sachdev, J.D.	44	Senior Vice President, Corporate Affairs and Public Policy, and Commercial Business Lead, Canada
Christiana Stamoulis, M.B.A.	41	Senior Vice President, Corporate Strategy and Business Development
Paul M. Silva	46	Senior Vice President and Corporate Controller
Joshua S. Boger, Ph.D.	60	Director
Terrence C. Kearney	57	Director
Margaret G. McGlynn	52	Director
Wayne J. Riley, M.D., M.B.A.	52	Director
Bruce I. Sachs	52	Director
Elaine S. Ullian	64	Director
Dennis L. Winger	64	Director

Mr. Emmens is our Executive Chairman, a position he was appointed to on February 1, 2012. Mr. Emmens plans to retire in May 2012. Mr. Emmens was our Chief Executive Officer from May 2009 through January 2012 and our President from February 2009 through January 2012. He has been a member of our Board of Directors since 2004 and became our Chairman in May 2009. Mr. Emmens is the Chairman of the Board of Directors of Shire plc, and has been a member of Shire's board since March 2003. From March 2003 to June 2008, Mr. Emmens was also the Chief Executive Officer of Shire plc. Before joining Shire in 2003, Mr. Emmens served as President of Merck KGaA's global prescription pharmaceuticals business in Darmstadt, Germany. In 1999, he joined Merck KGaA and established EMD Pharmaceuticals, Inc., its United States prescription pharmaceutical business. Mr. Emmens held the position of President and Chief Executive Officer at EMD Pharmaceuticals from 1999 to 2001. Prior to this, Mr. Emmens held various positions, including Chief Executive Officer, at Astra Merck, Inc. as well as several positions at Merck & Co., Inc. Mr. Emmens was a member of the Board of Directors of Incyte Corporation, a drug development company, from 2006 through February 2009. Mr. Emmens received a B.S. degree in business management from Farleigh Dickinson University.

Dr. Leiden is our Chief Executive Officer and President, a position he was appointed to on February 1, 2012 after joining us as CEO Designee on December 14, 2011. He has been a member of our Board of Directors since July 2009 and served as our lead independent director from October 2010 through December 2011. Dr. Leiden was a Managing Director at Clarus Ventures, a life sciences venture capital firm, from 2006 through January 2012. Dr. Leiden was President and Chief Operating Officer of Abbott Laboratories, Pharmaceuticals Products Group, and a member of the Board of

Directors of Abbott Laboratories from 2001 to 2006. From 1987 to 2000, Dr. Leiden held several academic appointments, including the Rawson Professor of Medicine and Pathology and Chief of Cardiology and Director of the Cardiovascular Research Institute at the University of Chicago, the Elkan R. Blout Professor of Biological Sciences at the Harvard School of Public Health, and Professor of Medicine at Harvard Medical School. He is an elected member of both the American Academy of Arts and Sciences, and the Institute of Medicine of the National Academy of Sciences. Dr. Leiden is a senior advisor to Clarus Ventures. Dr. Leiden was a director and the non-executive Vice Chairman of the board of Shire plc, a specialty biopharmaceutical company, from 2006 to January 2012, and was also a member of the Board of Directors of Millennium Pharmaceuticals, Inc. from October 2007 until it was acquired in June 2008. Dr. Leiden received his M.D., Ph.D. and B.A. degrees from the University of Chicago.

Dr. Mueller is our Executive Vice President, Global Research and Development, a position he has held since May 2009, and has been our Chief Scientific Officer since July 2003. Dr. Mueller was our Executive Vice President, Drug Innovation and Realization, from February 2006 to May 2009, and our Senior Vice President, Drug Discovery and Innovation, from July 2003 to February 2006. Prior to joining us, Dr. Mueller was the Senior Vice President, Research and Development, of Boehringer Ingelheim Pharmaceuticals, Inc., with responsibility for the development of all drug candidates in the company's portfolio in North America. He led research programs in the areas of immunology, inflammatory cardiovascular disease and gene therapy on a global basis. During his time with Boehringer Ingelheim, Dr. Mueller oversaw the discovery of numerous development candidates and held several positions in basic research, medicinal chemistry and management. Dr. Mueller received both an undergraduate degree and a Ph.D. in chemistry at the Albert Einstein University of Ulm, Germany, where he also holds a Professorship in Theoretic Organic Chemistry. He completed fellowships in quantum pharmacology at Oxford University and in biophysics at Rochester University.

Mr. Smith is our Executive Vice President and Chief Financial Officer, a position he has held since February 2006. From November 2003 to February 2006, he was our Senior Vice President and Chief Financial Officer, and from October 2001 to November 2003, he served as our Vice President and Chief Financial Officer. Prior to joining us, Mr. Smith served as a partner in the Life Science and Technology Practice Group of Ernst & Young LLP, an accounting firm, from 1999 to 2001. Mr. Smith initially joined Ernst & Young's U.K. firm in 1987, and then joined its Boston office in 1995. Mr. Smith currently is a member of the Boards of Directors of Acorda Therapeutics, Inc., a drug development company, and Infinity Pharmaceuticals, Inc., a drug development company. Mr. Smith holds a B.A. in accounting and finance from Manchester Metropolitan University, U.K., is a member of the American Institute of Certified Public Accountants and is a Chartered Accountant of England and Wales.

Ms. Wysenski is our Executive Vice President and Chief Commercial Officer, a position she has held since December 2009. Prior to joining us, Ms. Wysenski held the position of Chief Operating Officer of Endo Pharmaceuticals, a 1,200-person specialty pharmaceutical company, where she led sales, marketing, commercial operations, supply chain management, human resources and various business development initiatives. Prior to her role at Endo, Ms. Wysenski participated in the establishment of EMD Pharmaceuticals, Inc., where she held various leadership positions, including the role of President and Chief Executive Officer from 2001 to 2006 and Vice President of Commercial from 1999 to 2001. From 1984 to 1998, Ms. Wysenski held several sales-focused roles at major pharmaceutical companies, including Vice President of Field Sales for Astra Merck, Inc. Ms. Wysenski serves on the North Carolina Central University Board of Trustees and as a director for Reata Pharmaceuticals, Inc., a privately held company. She is a founder of the Research Triangle Park chapter of the Healthcare Business Women's Association. Ms. Wysenski holds a B.S. from Kent State University and an Executive M.B.A. from Baldwin Wallace College.

Mr. Howton is our Senior Vice President and Chief Legal Officer, a position he has held since September 2011. Mr. Howton was our Chief Compliance Officer from September 2009 through

September 2011. Mr. Howton worked at Genentech, Inc. in a number of legal roles from 2003 through 2009 and served as Genentech's Healthcare Compliance Officer from May 2006 through August 2009. Prior to Genentech, Mr. Howton practiced law in the Healthcare Group at the law firm of Sidley Austin. Mr. Howton holds a B.A. in Political Science from Yale University and a J.D. from Northwestern University School of Law.

Ms. Kelly-Croswell is our Senior Vice President, Human Resources, a position she has held since July 2007. Ms. Kelly-Croswell served as our Vice President, Human Resources from July 2006 through June 2007. From November 2005 through June 2006, Ms. Kelly-Croswell served as Vice President of Human Resources of NitroMed, Inc., a pharmaceutical company. From February 2004 to November 2005, Ms. Kelly-Croswell served as Senior Vice President, Human Resources, for the Health Care Division and Service Operations, of CIGNA, an employee benefits company. From September 2001 to February 2004, Ms. Kelly-Croswell served as Vice President of Human Resources for Global Research and Development for the Monsanto Company, an agricultural products and solutions company that she joined in 1998. Ms. Kelly-Croswell holds a B.S. in Finance and an M.A. in Labor and Industrial Relations from the University of Illinois at Urbana-Champaign.

Mr. Sachdev is our Senior Vice President, Corporate Affairs and Public Policy, and Commercial Business Lead, Canada. As a Senior Vice President, he has led our government affairs, public policy and patient advocacy functions since he joined us in July 2007. In October 2010, he took on the added role of building and managing our Canadian business operations. Mr. Sachdev served as Executive Vice President, Health of the Biotechnology Industry Organization (BIO) from April 2005 through June 2007. At BIO, he was the senior executive responsible for managing BIO's Health Section and its Governing Board, and for directing all health care policy and execution. Mr. Sachdev was the Deputy Commissioner for Policy at the FDA from April 2004 through April 2005, and held several other senior positions within the FDA from September 2002 through April 2004. From 1998 to 2002, Mr. Sachdev served as Majority Counsel to the Committee on Energy and Commerce in the United States House of Representatives, where he was responsible for bioterrorism, food safety and environmental issues. From 1993 to 1997, Mr. Sachdev practiced law, first at the Chemical Manufacturers Association, and then with the law firm of Ropes & Gray. Mr. Sachdev holds a B.S. from Carnegie Mellon University, and a J.D. from Emory University School of Law.

Ms. Stamoulis is our Senior Vice President, Corporate Strategy and Business Development, a position she has held since October 2009. Prior to joining us, she was a Managing Director in Citigroup's Healthcare Banking Group from April 2006 to February 2009. From 2000 to April 2006, Ms. Stamoulis was an investment banker in the Healthcare Investment Banking Group of Goldman, Sachs & Co., where she was a Vice President from January 2002 through April 2006. Ms. Stamoulis started her career as a strategy consultant at The Boston Consulting Group. Ms. Stamoulis is a member of the Board of Directors of Hologic, Inc., a company focused on diagnostics, medical imaging systems and surgical products for women. Ms. Stamoulis holds a B.S. in Economics and a B.S. in Architecture from the Massachusetts Institute of Technology and an M.B.A. from the MIT Sloan School of Management.

Mr. Silva is our Senior Vice President and Corporate Controller, a position he has held since April 2011. Mr. Silva joined us in August 2007 as Senior Director, Accounting Operations and was our Vice President and Corporate Controller from September 2008 through April 2011. Prior to joining us, he was the Vice President, Internal Reporting at Iron Mountain Incorporated from July 2006 until August 2007 and a consultant to Iron Mountain's financing department from April 2005 until July 2006. He was the Finance Director of the Bioscience Technologies Division of Thermo Electron Corporation from 2002 to April 2005. Mr. Silva holds a B.S. in accounting from Assumption College.

Dr. Boger is the founder of Vertex and has been a director since our inception in 1989. He was our Chief Executive Officer from 1992 through May 2009. He was our Chairman of the Board from

1997 until May 2006 and our President from our inception until December 2000, and from 2005 through February 2009. He was our Chief Scientific Officer from 1989 until May 1992. Prior to founding Vertex in 1989, Dr. Boger held the position of Senior Director of Basic Chemistry at Merck Sharp & Dohme Research Laboratories in Rahway, New Jersey, where he headed both the Department of Medicinal Chemistry of Immunology & Inflammation and the Department of Biophysical Chemistry. Dr. Boger holds a B.A. in chemistry and philosophy from Wesleyan University and M.S. and Ph.D. degrees in chemistry from Harvard University.

Mr. Kearney has been a member of our Board of Directors since May 2011. Mr. Kearney served as the Chief Operating Officer of Hospira, Inc., a specialty pharmaceutical and medication delivery company, from April 2006 to January 2011. From April 2004 to April 2006, he served as Hospira's Senior Vice President, Finance, and Chief Financial Officer, and he served as Acting Chief Financial Officer through August 2006. Mr. Kearney served as Vice President and Treasurer of Abbott Laboratories from 2001 to April 2004. From 1996 to 2001, Mr. Kearney was Divisional Vice President and Controller for Abbott's International Division. He received his B.S. in biology from the University of Illinois and his M.B.A. from the University of Denver.

Ms. McGlynn has been a member of our Board of Directors since May 2011. Ms. McGlynn has served as the President and Chief Executive Officer of the International AIDS Vaccine Initiative, a global not-for-profit organization whose mission is to ensure the development of safe, effective and accessible HIV vaccines for use throughout the world, since July 2011. Ms. McGlynn served as President, Vaccines and Infectious Diseases of Merck & Co., Inc. from 2005 until 2009. Ms. McGlynn joined Merck in 1983 and served in a variety of marketing, sales and managed care roles. Currently, Ms. McGlynn serves as a member of the Board of Directors for Air Products and Chemicals, Inc., a company specializing in gases and chemicals for industrial uses, and Amicus Therapeutics, Inc., a biopharmaceutical company. She is also a member of the National Industrial Advisory Committee at the University at Buffalo School of Pharmacy and Pharmaceutical Sciences. Ms. McGlynn holds a B.S. in Pharmacy and an M.B.A. in Marketing from the State University of New York at Buffalo.

Dr. Riley has been a member of our Board of Directors since July 2010. Dr. Riley is President and Chief Executive Officer of Meharry Medical College, a position he has held since January 2007. In addition, he holds the academic rank of Professor of Internal Medicine at both Meharry and Vanderbilt University Schools of Medicine. From May 2004 to December 2006, Dr. Riley served as a corporate officer and member of the executive management team as Vice President and Vice Dean for Health Affairs and Governmental Relations and Associate Professor of Medicine at Baylor College of Medicine, and Assistant Chief of Medicine at Ben Taub General Hospital, Baylor's primary adult public hospital teaching affiliate. He served as Assistant Dean for Education at Baylor College of Medicine from 2000 to 2004. Dr. Riley is a member of the Board of Directors of Pinnacle Financial Partners, Inc., a financial services holding firm, and HCA Holdings, Inc., a leading operator of hospitals and health facilities. Dr. Riley earned a B.A. from Yale University, an M.P.H. in health systems management from the Tulane University School of Public Health and Tropical Medicine, an M.D. from the Morehouse School of Medicine and an M.B.A. from the Jones Graduate School of Business, Rice University.

Mr. Sachs has been a member of our Board of Directors since 1998. He is a General Partner at Charles River Ventures, a venture capital firm he joined in 1999. From 1998 to 1999, he served as Executive Vice President and General Manager of Ascend Communications, Inc. From 1997 until 1998, Mr. Sachs served as President and Chief Executive Officer of Stratus Computer, Inc. From 1995 to 1997, he served as Executive Vice President and General Manager of the Internet Telecom Business Group at Bay Networks, Inc. From 1993 to 1995, he served as President and Chief Executive Officer at Xylogics, Inc. Mr. Sachs was a director of BigBand Networks, Inc., a network-based platform company, from 2005 through June 2009. Mr. Sachs holds a B.S.E.E. in electrical engineering from Bucknell

University, an M.E.E. in electrical engineering from Cornell University, and an M.B.A. from Northeastern University.

Ms. Ullian has been a member of our Board of Directors since 1997. From 1996 through January 2010, she served as President and Chief Executive Officer of Boston Medical Center, a private, not-for-profit, 626-bed, academic medical center with a community-based focus. From 1994 to 1996, she served as President and Chief Executive Officer of Boston University Medical Center Hospital. From 1987 to 1994, Ms. Ullian served as President and Chief Executive Officer of Faulkner Hospital. She also serves as a director of Thermo Fisher Scientific Inc. and Hologic, Inc. In addition, Ms. Ullian was a member of the Board of Directors of Valeant Pharmaceuticals, Inc. from 2005 through 2007. Ms. Ullian holds a B.A. in political science from Tufts University and an M.P.H. from the University of Michigan.

Mr. Winger has been a member of our Board of Directors since July 2009. Mr. Winger has over 30 years of experience as a financial executive, the majority of which has focused on the life sciences industry. He retired in 2008 from Applera Corporation, a life sciences company, where he had been Senior Vice President and Chief Financial Officer since 1997. He was previously Senior Vice President of Finance and Administration, and Chief Financial Officer at Chiron Corporation. Before joining Chiron, Mr. Winger held various financial executive positions, including Chief Financial Officer of The Cooper Companies, Inc. Mr. Winger is currently a director of Accuray Incorporated and Nektar Therapeutics. In addition, Mr. Winger was a member of the Board of Directors of Cell Genesys, Inc. until its merger with BioSante Pharmaceuticals in October 2009 and a member of the Board of Cephalon Inc. until its acquisition by Teva Pharmaceutical Industries Ltd. in October 2011. He holds an M.B.A. from Columbia University Graduate School of Business and he earned his undergraduate degree from Siena College.

ITEM 1A. RISK FACTORS

RISK FACTORS

Investing in our common stock involves a high degree of risk, and you should carefully consider the risks and uncertainties described below in addition to the other information included or incorporated by reference in this Annual Report on Form 10-K. If any of the following risks or uncertainties actually occurs, our business, financial condition or results of operations would likely suffer, possibly materially. In that case, the trading price of our common stock could decline.

Risks Related to Commercialization of Our Products

We depend heavily on our revenues from sales of INCIVEK (telaprevir) in the United States, and our future revenues from INCIVEK are uncertain.

We obtained approval to sell INCIVEK (telaprevir) in the United States in May 2011. Prior to the launch of INCIVEK we had not sold or marketed a therapeutic product. As a result, a majority of our total revenues in 2011 were attributable to sales of INCIVEK in the United States. INCIVEK competes with VICTRELIS (boceprevir), a protease inhibitor that also was approved in 2011 and is being marketed by Merck & Co., Inc. We expect that, starting in late 2013, one or more additional competitive products currently in late-stage development for the treatment of HCV infection may become available. Our future revenues from sales of INCIVEK depend on numerous factors, including:

- The number of patients with genotype 1 HCV infection, including treatment-naïve patients and patients who did not achieve a sustained viral response with prior treatment, who seek treatment. Although the number of patients with genotype 1 HCV infection is significant, it is estimated that less than half of those patients are aware that they are infected, and many of the patients that are aware of their infection have not historically sought treatment.
- Competition from VICTRELIS-based treatment regimens, which compete with INCIVEK-based treatment regimens on the basis of, among other things, efficacy, cost, breadth of approved use, side-effect profile and cost of co-therapies.
- Competitive pressures from development-stage drug candidates, including potential all-oral, interferon-free combination therapies, which may influence some physicians and patients with HCV infection to defer treatment until these drug candidates or other treatment options become available.
- Competition from any additional products for the treatment of HCV infection that are approved by the FDA in the future.
- The safety profile of INCIVEK, including whether previously unknown side-effects or increased incidence or severity of side-effects as compared to those seen during development are identified with the increased use of INCIVEK after approval.
- The effectiveness of our commercial strategy for marketing INCIVEK and our execution of that strategy, including our pricing strategy and the effectiveness of our efforts to obtain adequate third-party reimbursements.
- The capacity of physicians and health care providers to provide treatment to patients with HCV infection.
- Our ability to maintain and successfully monitor commercial manufacturing arrangements for INCIVEK with third-party manufacturers to ensure they meet our standards and those of regulatory authorities, including the FDA, which extensively regulate and monitor pharmaceutical manufacturing facilities.

While INCIVEK has established a competitive commercial profile, we cannot accurately predict the amount of revenues INCIVEK will generate in future periods. If our revenues, market share and/or other indicators of market acceptance of INCIVEK do not meet the expectations of investors or public market analysts, the market price of our common stock would likely decline. In addition, if one or more of the factors above negatively affects INCIVEK sales, our business and financial condition could be materially harmed.

Janssen began marketing INCIVO (telaprevir) at the end of the third quarter of 2011, and we cannot predict the royalty revenues we will receive based on INCIVO sales by Janssen in its territories.

Janssen obtained approval to market INCIVO (telaprevir) from the European Commission in September 2011, and we earned \$16.5 million in royalty revenues on net sales of INCIVO by Janssen in the fourth quarter of 2011. In addition to the factors that contribute to the uncertainty of sales of INCIVEK (telaprevir) by us in the United States discussed above, which apply equally to Janssen's sales in its territory, sales in Janssen's territory are dependent upon Janssen's sales and marketing efforts, which we do not control and may not be able to effectively influence, and the actions and decisions of foreign regulatory authorities. While we expect our royalty revenues on net sales of INCIVO to increase in future periods as compared to the fourth quarter of 2011, we cannot predict the royalty revenues that we will recognize in future periods from sales of INCIVO by Janssen or the timing of such revenues.

We cannot accurately predict future revenues from KALYDECO (ivacaftor), which will be dependent on, among other factors, our ability to obtain adequate reimbursement and whether or not we are able obtain additional regulatory approvals for KALYDECO.

We have obtained approval to market KALYDECO (ivacaftor) in the United States for the treatment of patients with CF six years of age and older with the G551D mutation in the *CFTR* gene, but have not yet obtained approval for KALYDECO in any other population or jurisdiction. We believe that the total number of patients with CF who have this mutation in the United States is approximately 1,200. KALYDECO was approved for marketing in January 2012, and we do not yet know how many patients with CF will receive treatment with KALYDECO or the adequacy of the extent of coverage, pricing and level of reimbursement from governmental agencies and third-party payors that will be available for KALYDECO.

Over the next several years our revenues from KALYDECO also will depend on our ability to obtain regulatory approval in Europe, Canada and Australia. We are seeking approval from the European Commission to market KALYDECO for the treatment of patients with CF six years of age and older with the G551D mutation in the *CFTR* gene and with certain other mutations in the *CFTR* gene that result in gating defects. There can be no assurance that ivacaftor will be approved by the European Commission or that the European Commission will not limit any such approval to patients with CF who have the G551D mutation in the *CFTR* gene.

We are planning to conduct several additional clinical trials to evaluate KALYDECO as a monotherapy in additional patient populations, including patients younger than six years of age with gating mutations and patients with other mutations in the *CFTR* gene, which may result in additional revenues if successful. These clinical trials are subject to many of the same risks and uncertainties as the clinical trials for our drug candidates. Even if these clinical trials are successful, we do not expect that we would obtain approval for the use of KALYDECO in additional populations until 2013 or later.

If our competitors bring drugs with superior product profiles to market, our drugs may not be competitive and our revenues could decline.

INCIVEK, KALYDECO and any drugs we develop in the future may not be able to compete effectively with drugs that are currently on the market or new drugs that may be developed by others. There are many other companies developing drugs for the same indications that we are pursuing. In order to compete successfully in these areas, we must demonstrate improved safety, efficacy and/or tolerability, and ease of manufacturing, and gain and maintain market acceptance over competing drugs that may receive regulatory approval before or after our products and drug candidates, and over those that currently are marketed. Many of our competitors, including major pharmaceutical companies such as Merck, Bristol-Myers Squibb, Gilead, Johnson & Johnson, Novartis, Pfizer, Abbott, Sanofi and Roche, possess substantially greater financial, technical and human resources than we possess.

In addition to the initial competition from Merck's VICTRELIS, we are aware of a number of companies that are developing new treatments for HCV infection including HCV protease inhibitors, HCV nucleotide analogues, non-nucleoside HCV polymerase inhibitors, HCV NS5A inhibitors and advanced interferons. Although drug development is a lengthy process and involves a high degree of risk, we expect that over the next several years one or more of these competitive HCV drug candidates may be approved for marketing in the United States and elsewhere in the world. As a result, the longer-term commercial prospects for INCIVEK and VX-222, ALS-2200 and ALS-2158, if approved, will depend on, among other factors:

- the efficacy, safety, tolerability and other characteristics of INCIVEK and VX-222, ALS-2200 and ALS-2158, if approved, relative to existing and future treatments for HCV infection;
- our ability to establish INCIVEK and/or VX-222, ALS-2200 and/or ALS-2158, if approved, as a significant component of any approved all-oral therapy or shorter-duration therapy for the treatment of HCV infection; and
- the clinical data obtained and timing of marketing approvals for drug candidates being developed by our competitors, including any all-oral therapy or shorter-duration therapy for the treatment of HCV infection.

It is possible that one or more competing therapies for the treatment of HCV infection could be developed with a better efficacy, safety and/or tolerability profile than our telaprevir-based treatment regimens, which would negatively affect INCIVEK and INCIVO sales and could negatively affect our business and financial condition.

If we discover safety issues with our products that were not known at the time of approval or if we fail to comply with continuing United States and applicable foreign regulations, commercialization efforts for our products could be negatively affected, approved products could lose their approval or sales could be suspended, and our business could be materially harmed.

Our products are subject to continuing regulatory oversight, including the review of additional safety information. Drugs are more widely used by patients once approval has been obtained and therefore side-effects and other problems may be observed after approval that were not seen or anticipated, or were not as prevalent or severe, during pre-approval clinical trials or nonclinical studies. The subsequent discovery of previously unknown problems with a product could negatively affect commercial sales of the product, result in restrictions on the product or lead to the withdrawal of the product from the market. The reporting of adverse safety events involving our products or public speculation about such events could cause our stock price to decline or experience periods of volatility.

If we or our collaborators fail to comply with applicable continuing regulatory requirements, we or our collaborators may be subject to fines, suspension or withdrawal of regulatory approvals for specific drugs, product recalls and seizures, operating restrictions and/or criminal prosecutions. In addition, the

manufacturers we engage to make our products and the manufacturing facilities in which our products are made are subject to periodic review and inspection by the FDA and foreign regulatory authorities. If problems are identified during the review or inspection of these manufacturers or manufacturing facilities, it could result in our inability to use the facility to make our product or a determination that inventories are not safe for commercial sale.

If physicians, patients and third-party payors do not accept our drugs, we may be unable to generate significant revenues in future periods.

Our drugs may not gain or maintain market acceptance among physicians and patients. Effectively marketing INCIVEK and KALYDECO, and any of our other drug candidates, if approved, requires substantial efforts, both prior to launch and after approval. Physicians may elect not to prescribe our drugs, and patients may elect not to request or take them, for a variety of reasons including:

- lower demonstrated efficacy, safety and/or tolerability compared to other drugs;
- prevalence and severity of adverse side-effects;
- lack of cost-effectiveness;
- lack of reimbursement availability from third-party payors;
- a decision to wait for the approval of other therapies in development that have significant perceived advantages over our applicable drug;
- convenience and ease of administration;
- other potential advantages of alternative treatment methods; and
- ineffective marketing and/or distribution support.

If our drugs fail to achieve and maintain market acceptance, we will not be able to generate significant revenues in future periods.

Government and other third-party payors seek to contain costs of health care through legislative and other means. If they fail to provide coverage and adequate reimbursement rates for our products, our revenues will be harmed.

In both domestic and foreign markets, our sales of products depends in part upon the availability of reimbursement from third-party payors. Third-party payors include government health programs such as Medicare and Medicaid, managed care providers, private health insurers and other organizations. Governments and other third-party payors seek to contain or reduce the costs of health care through various means. For example, in certain foreign markets, pricing or profitability of therapeutic and other pharmaceutical products is subject to governmental control. In the United States, there have been, and we expect that there will continue to be, a number of federal and state proposals to implement similar governmental control. The recently enacted ACA will require discounts under the Medicare drug benefit program and increases the rebates paid by pharmaceutical companies on drugs covered by Medicaid. In addition, the ACA imposes an annual fee, which will increase annually, on sales by branded pharmaceutical manufacturers. The financial impact of these discounts, increased rebates and fees and the other provisions of the ACA on our business is unclear, and there can be no assurance that our business will not be materially harmed by future implementation of the ACA.

In addition, third-party payors are increasingly attempting to contain health care costs by demanding price discounts or rebates and limiting both the types and variety of drugs that they will cover and the amounts that they will pay for drugs. As a result, they may not cover or provide adequate payment for our products. We might need to conduct post-marketing studies in order to demonstrate the cost-effectiveness of our drugs or any other future drugs to such payors' satisfaction.

Such studies might require us to commit a significant amount of management's time and financial and other resources. Our products might not ultimately be considered cost-effective. Adequate third-party reimbursement might not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on payments allowed for lower-cost products that already are reimbursed, may be incorporated into existing payments for other products or services, and may reflect budgetary constraints and/or imperfections in Medicare or Medicaid data used to calculate these rates. Net prices for products are reduced by mandatory discounts or rebates required by government health care programs and privately-negotiated discounts. While we have implemented policies in an effort to comply with mandated reimbursement rates, the United States federal government, state governments and private payors frequently pursue actions against pharmaceutical and biotechnology companies alleging that the companies have overstated prices in order to inflate reimbursement rates. Any such action could adversely affect the pricing of and the commercial success of our products.

Any legislation or regulatory changes or relaxation of laws that restrict imports of drugs from other countries also could reduce the net price we receive for our products.

If we market any of our products in a manner that violates federal or state health care laws, including fraud and abuse laws, laws prohibiting off-label promotion, disclosure laws or other similar laws, we may be subject to civil or criminal penalties.

We are subject to health care "fraud and abuse" laws, such as the federal False Claims Act and the anti-kickback provisions of the federal Social Security Act, laws prohibiting off-label product promotion and other similar state and federal laws and regulations. While we have a corporate compliance program designed to actively identify, prevent and mitigate risk through the implementation of compliance policies and systems and the promotion of a culture of compliance, if we are found not to be in full compliance with these laws our business could be materially harmed.

The federal anti-kickback law prohibits knowingly and willfully offering, paying, soliciting, receiving or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual, or the ordering, furnishing, arranging for or recommending of an item or service that is reimbursable, in whole or in part, by a federal health care program, such as Medicare or Medicaid. The federal statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, patients, purchasers and formulary managers on the other hand, and therefore constrains our marketing practices and our various service arrangements with physicians, including physicians who make clinical decisions to use our products. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain common activities from prosecution, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchasing, or recommending may be subject to scrutiny or penalty if they do not qualify for an exemption or safe harbor.

Federal false claims laws prohibit any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to get a false claim paid. Pharmaceutical companies have been prosecuted under these laws for a variety of alleged promotional and marketing activities, such as providing free product to customers with the expectation that the customers would bill federal programs for the product; reporting to pricing services inflated average wholesale prices that were then used by federal programs to set reimbursement rates; engaging in promotion for uses that the FDA has not approved, known as "off-label" uses, that caused claims to be submitted to Medicaid for non-covered off-label uses; and submitting inflated "best price" information to the Medicaid Rebate Program.

Although physicians are permitted to, based on their medical judgment, prescribe products for indications other than those cleared or approved by the FDA, manufacturers are prohibited from promoting their products for such off-label uses. We market INCIVEK for adults with genotype 1 HCV infection and KALYDECO for patients six years of age or older with CF who have the G551D mutation in the *CFTR* gene, and provide promotional materials and training programs to physicians regarding the use of INCIVEK and KALYDECO in these patient populations. If the FDA determines that our promotional materials, training or other activities constitute off-label promotion, it could request that we modify our training or promotional materials or other activities or subject us to regulatory enforcement actions, including the issuance of a warning letter, injunction, seizure, civil fine and criminal penalties. It also is possible that other federal, state or foreign enforcement authorities might take action if they believe that the alleged improper promotion led to the submission and payment of claims for an off-label use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false claims for reimbursement. Even if it is later determined we were not in violation of these laws, we may be faced with negative publicity, incur significant expenses defending our actions and have to divert significant management resources from other matters.

Also applicable to some of our practices is HIPAA and its implementing regulations, which created federal criminal laws that prohibit executing a scheme to defraud any health care benefit program or making false statements relating to health care matters and which also imposes certain regulatory and contractual requirements regarding the privacy, security and transmission of individually identifiable health information.

The majority of states also have statutes or regulations similar to the federal anti-kickback law and false claims laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor. In addition, certain states have laws governing the privacy of certain health information, which may differ from each other in significant ways and often are not preempted by HIPAA, complicating compliance efforts. Sanctions under these federal and state laws may include civil monetary penalties, exclusion of a pharmaceutical manufacturer's products from reimbursement under government programs and criminal fines. Even if we are not determined to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which could harm our business.

In recent years, several states and localities, including California, the District of Columbia, Maine, Minnesota, Nevada, New Mexico, Vermont and West Virginia, have enacted legislation requiring pharmaceutical companies to establish marketing compliance programs, file periodic reports with the state or make periodic public disclosures on sales, marketing, pricing, clinical trials, HCP payments and other activities. Similar legislation is being considered in other states. Additionally, as part of the ACA, the federal government has enacted the Physician Payment Sunshine provisions. The Physician Payment Sunshine provisions will require pharmaceutical manufacturers to publicly report gifts and payments made to physicians and teaching hospitals. On December 14, 2011, CMS published a proposed rule and postponed the statute's January 1, 2012 start date for pharmaceutical manufacturers to collect data to be used in fulfilling their reporting requirements. When the final rules are issued, many of these requirements will be new and uncertain, and the penalties for failure to comply with these requirements will be significant. If we are found not to be in full compliance with these laws, we could face enforcement action, fines and other penalties, and could receive adverse publicity.

The ACA also includes various provisions designed to strengthen significantly fraud and abuse enforcement, such as increased funding for enforcement efforts and the lowering of the intent requirement of the federal anti-kickback statute and criminal health care fraud statute such that a person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it.

If our past or present operations are found to be in violation of any such laws or any other governmental regulations that may apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from federal health care programs and/or the curtailment or restructuring of our operations. The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are subject to a variety of interpretations. Any action against us for violation of these laws, even if we successfully defend against them, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business.

The sales and marketing practices of our industry have been the subject of increased scrutiny from federal and state government agencies, and we believe that this trend will continue. We have in place policies to govern how we may retain health care professionals as consultants that reflect the current climate on this issue and are providing training on these policies. Any action against us for violation of these laws, even if we successfully defend against them, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business.

Future health care reform measures could hinder or prevent commercial success of our drugs and drug candidates.

The United States federal government and other governments have shown significant interest in pursuing health care reform. Any government-adopted reform measures could adversely affect the pricing of health care products, including our approved products and/or any future drug candidates approved for sale. The continuing efforts of governments, insurance companies, managed care organizations and other payors for health care products to contain or reduce health care costs may adversely affect our ability to set prices we believe are fair for our products or any drugs we may develop and commercialize.

New laws, regulations and judicial decisions, or new interpretations of existing laws, regulations and decisions, relating to health care availability, methods of delivery or payment for drugs, or sales, marketing or pricing, may limit our potential revenues, and we may need to revise our research and development or commercialization programs. The pricing and reimbursement environment may change in the future and become more challenging for any of several reasons, including policies advanced by the U.S. government, new health care legislation or fiscal challenges faced by government health administration authorities. Specifically, in the United States and some foreign jurisdictions, there have been a number of legislative and regulatory proposals and initiatives to change the health care system in ways that could affect our ability to sell products. Some of these proposed and implemented reforms could result in reduced reimbursement rates for our current or future products, which would adversely affect our business, operations and financial results. As discussed above, the recently enacted ACA may have far reaching consequences for biopharmaceutical companies like us. As a result of this new legislation, substantial changes could be made to the current system for paying for health care in the United States, including changes made in order to extend medical benefits to those who currently lack health insurance coverage. Extending coverage to a large population could substantially change the structure of the health insurance system and the methodology for reimbursement. If reimbursement for our products is substantially less than we expect in the future, or rebate obligations associated with them are substantially increased, our business could be materially and adversely affected.

Further federal and state proposals and health care reforms in and outside of the United States could limit the prices that can be charged for our products and may further limit our commercial opportunity. Our results of operations could be materially adversely affected by the ACA, by the Medicare prescription drug coverage legislation, by the possible effect of such current or future legislation on amounts that private insurers will pay and by other health care reforms that may be enacted or adopted in the future.

Risks Related to Development, Clinical Testing and Regulation of our Products and Drug Candidates

Our drug candidates remain subject to clinical testing and regulatory approval. If we are unable to successfully develop and test our drug candidates, we will not be successful.

In addition to the successful commercialization of INCIVEK and KALYDECO, our business depends upon the successful development and commercialization of additional drug candidates. Our drug candidates are in various stages of development and must satisfy rigorous standards of safety and efficacy before they can be approved by the FDA or comparable foreign regulatory authorities for sale. To satisfy these standards, we must allocate resources among our various development programs and must engage in expensive and lengthy testing of our drug candidates. Discovery and development efforts for new pharmaceutical products, including new combination therapies, are resource-intensive and may take 10 to 15 years or longer for each drug candidate. Despite our efforts, our drug candidates may not:

- offer therapeutic or other improvement over existing competitive drugs;
- be proven safe and effective in clinical trials;
- meet applicable regulatory standards;
- be capable of being produced in commercial quantities at acceptable costs; or
- if approved for commercial sale, be successfully marketed as pharmaceutical products.

We have ongoing or planned Phase 2 clinical trials for a number of our drug candidates. The strength of our company's pipeline of drug candidates, including drug candidates that could potentially be complementary to INCIVEK (telaprevir) and/or KALYDECO (ivacaftor), will depend in large part upon the outcomes of these Phase 2 clinical trials. Findings, including toxicology findings, in nonclinical studies conducted concurrently with clinical trials as well as results of our clinical trials could lead to abrupt changes in our development activities, including the possible cessation of development activities associated with a particular drug candidate or program. Furthermore, results from our clinical trials may not meet the level of statistical significance required by the FDA or other regulatory authorities for approval of a drug candidate.

We and many other companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in later-stage clinical trials even after achieving promising results in earlier-stage clinical trials. Accordingly, the results from the completed preclinical studies and clinical trials may not be replicated in later clinical trials, and ongoing clinical trials for our drug candidates may not be predictive of the results we may obtain in later-stage clinical trials or of the likelihood of approval of a drug candidate for commercial sale. In addition, from time to time we and our competitors report interim data from our clinical trials, including, with respect to our HCV drug candidates, data regarding patients' HCV RNA levels during treatment or at the completion of treatment. Interim data from a clinical trial, and in particular interim on-treatment data, may not be predictive of final results from the clinical trial.

If we are unable to obtain regulatory approval, we will be unable to commercialize our drug candidates.

Our drug candidates are subject to extensive governmental regulations relating to their development, clinical evaluation, manufacturing and commercialization. Rigorous nonclinical testing and clinical trials and an extensive regulatory approval process are required in the United States and in most other countries prior to the commercial sale of drug candidates. Satisfaction of these and other regulatory requirements is costly, time-consuming, uncertain and subject to unanticipated delays. It is possible that none of the drug candidates we are developing will be approved for marketing.

The time required to complete clinical trials and to satisfy the FDA and other countries' regulatory review processes is uncertain and typically takes many years. Our analysis of data obtained from nonclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We also may encounter unanticipated delays or increased costs due to government regulation from future legislation or administrative action or changes in governmental policy during the period of drug development, clinical trials and governmental regulatory review.

Any failure to obtain regulatory approvals for a drug candidate would prevent us from commercializing that drug candidate. Any delay in obtaining required regulatory approvals could materially adversely affect our ability to successfully commercialize a drug candidate. Furthermore, any regulatory approval to market a drug may be subject to limitations that we do not expect on the indicated uses for which we may market the drug. Any such limitations could reduce the size of the market for the drug.

We also are subject to numerous foreign regulatory requirements governing the conduct of clinical trials, manufacturing and marketing authorization, pricing and third-party reimbursement. The foreign regulatory approval process includes all of the risks associated with the FDA approval process described above, as well as risks attributable to the satisfaction of foreign requirements. Approval by the FDA does not ensure approval by regulatory authorities outside the United States and approval by a foreign regulatory authority does not ensure approval by the FDA. In addition, the FDA may not favorably consider data from clinical trials conducted in foreign jurisdictions. Foreign jurisdictions have different approval procedures than those required by the FDA and may impose additional testing requirements for our drug candidates.

If clinical trials for a drug candidate are prolonged or delayed, our development timelines for the affected drug candidate could be extended, our costs to develop the drug candidate could increase and the competitive position of the drug candidate could be adversely affected.

We cannot predict whether or not we will encounter problems with any of our completed, ongoing or planned clinical trials that will cause us or regulatory authorities to delay or suspend clinical trials, or delay the analysis of data from our completed or ongoing clinical trials. Any of the following could delay the clinical development of our drug candidates:

- ongoing discussions with the FDA or comparable foreign authorities regarding the scope or design of our clinical trials and the number of clinical trials we must conduct;
- delays in enrolling volunteers or patients into clinical trials, including as a result of low numbers of patients that meet the eligibility criteria for the trial;
- a lower than anticipated retention rate of volunteers or patients in clinical trials;
- the need to repeat clinical trials as a result of inconclusive results, unforeseen complications in testing or clinical investigator error;
- inadequate supply or deficient quality of drug candidate materials or other materials necessary for the conduct of our clinical trials;
- unfavorable FDA or foreign regulatory authority inspection and review of a manufacturing facility for a drug candidate or its relevant manufacturing records or a clinical trial site or records of any clinical or preclinical investigation;
- unfavorable scientific results from clinical trials of our drug candidates;
- serious and unexpected drug-related side-effects experienced by participants in our clinical trials;

- favorable results in testing of our competitors' drug candidates, or FDA or foreign regulatory authority approval of our competitors' drug candidates; or
- action by the FDA or a foreign regulatory authority to place a clinical hold on a trial.

Our ability to enroll patients in our clinical trials in sufficient numbers and on a timely basis is subject to a number of factors, including the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites, the availability of effective treatments for the relevant disease, the number of other clinical trials ongoing and competing for patients in the same indication and the eligibility criteria for the clinical trial. In addition, patients may drop out of our clinical trials or may be lost to follow-up medical evaluation after treatment ends, and this could impair the validity or statistical significance of the trials. Delays in patient enrollment or unforeseen drop-out rates may result in increased costs and longer development times.

We, our collaborators, the FDA or other applicable regulatory authorities may suspend clinical trials of a drug candidate at any time if we or they believe the healthy volunteers or patients participating in such clinical trials are being exposed to unacceptable health risks or for other reasons. Any such suspension could materially adversely affect the development of a particular drug candidate and our business.

We may not successfully develop VX-222 and/or either of the HCV nucleotide analogues we license from Alios and, as a result, we could be subject to significant impairment charges in future periods.

In March 2009, we acquired ViroChem Pharma Inc., or ViroChem, for \$100.0 million in cash and 10.7 million shares of our common stock. We acquired ViroChem primarily in order to secure rights to two non-nucleoside HCV polymerase inhibitors, VX-222 and VX-759, as part of our strategy to pursue drug candidates that could potentially be developed in combination with INCIVEK and/or our earlier-stage drug candidates. At the time of acquisition, we allocated \$525.9 million to intangible assets related to the in-process research and development associated with the ViroChem drug candidates. In the third quarter of 2011, we determined that the fair value of VX-759 was zero dollars, which resulted in a \$105.8 million impairment charge in the third quarter of 2011. In 2011, we licensed two HCV nucleotide analogues, ALS-2200 and ALS-2158, from Alios and recorded \$250.6 million as an intangible asset on our consolidated balance sheet. As of December 31, 2011, our consolidated balance sheet included intangible assets of \$412.9 million related to VX-222 and \$250.6 million related to ALS-2200 and ALS-2158.

While we believe the data from the clinical trials and nonclinical studies to date support the continued development of VX-222, ALS-2200 and ALS-2158 for the treatment of HCV infection, there are numerous reasons why we may not be able to successfully develop a combination therapy for the treatment of HCV infection that includes VX-222, ALS-2200, ALS-2158 or a combination of any of them, including:

- data from clinical trials involving compounds evaluated separately may not predict possible outcomes, such as unforeseen drug interactions, from compounds dosed in combination, which could negatively affect the efficacy and safety profile of the combination therapy;
- positive results in small clinical trials and nonclinical studies may not be predictive of results in clinical trials involving large numbers of patients; and
- favorable results of testing or earlier FDA or foreign regulatory approval of competitors' products with a better product profile.

There can be no assurance that we will be able to successfully develop VX-222, ALS-2200 or ALS-2158 alone or in combination, and if we do not successfully develop these drug candidates we will incur additional impairment charges in future periods related to VX-222 or the HCV nucleotide

analogues licensed from Alios. If we incur a significant impairment charge, the value of our common stock could decrease.

If our processes and systems are not compliant with regulatory requirements, we could be subject to restrictions on marketing our drugs or could be delayed in submitting regulatory filings seeking approvals for our drug candidates.

We have a number of regulated processes and systems that are required to obtain and maintain regulatory approval for our drugs and drug candidates. These processes and systems are subject to continual review and periodic inspection by the FDA and other regulatory bodies. If compliance issues are identified at any point in the development and approval process, we may experience delays in filing for regulatory approval for our drug candidates, or delays in obtaining regulatory approval after filing. Any later discovery of previously unknown problems or safety issues with approved drugs or manufacturing processes, or failure to comply with regulatory requirements, may result in restrictions on such drugs or manufacturing processes, withdrawal of drugs from the market, the imposition of civil or criminal penalties or a refusal by the FDA and/or other regulatory bodies to approve pending applications for marketing approval of new drugs or supplements to approved applications, any of which could have a material adverse effect on our business. In addition, we are a party to agreements that transfer responsibility for complying with specified regulatory requirements, such as filing and maintenance of marketing authorizations and safety reporting or compliance with manufacturing requirements, to our collaborators and third-party manufacturers. If our collaborators or third-party manufacturers do not fulfill these regulatory obligations, any drugs for which we or they obtain approval may be subject to later restrictions on manufacturing or sale, which could have a material adverse effect on our business.

Risks Related to Collaborators, Manufacturing and Reliance on Third Parties

We depend on our collaborators to work with us to develop, manufacture and commercialize our products and some of our drug candidates.

We have granted development and commercialization rights for telaprevir to Janssen (worldwide other than North America and Far East) and to Mitsubishi Tanabe (Far East). We are entitled to royalties from any sales of INCIVO (telaprevir) in Janssen's territories. The success of the commercialization of INCIVO in Janssen's territories is dependent upon Janssen's sales and marketing efforts, which we do not control and may not be able to effectively influence. If Janssen does not effectively commercialize INCIVO, our anticipated cash flows from royalties on net sales of INCIVO would be materially harmed. We also in-license ALS-2200 and ALS-2158 from Alios and any loss of this license could materially harm our efforts to develop an all-oral, interferon-free treatment regimen for HCV infection.

The risks that we face in connection with these existing and any future collaborations include the following:

- Our collaborators may change the focus of their development and commercialization efforts or may have insufficient resources to effectively develop our drug candidates. Pharmaceutical and biotechnology companies historically have re-evaluated their development and commercialization priorities following mergers and consolidations, which have been common in recent years in these industries. The ability of some of our products and drug candidates to reach their potential could be limited if collaborators decrease or fail to increase development or commercialization efforts related to those products or drug candidates.
- Any future collaboration agreements may have the effect of limiting the areas of research and development that we may pursue, either alone or in collaboration with third parties.

- Collaborators may develop and commercialize, either alone or with others, drugs that are similar to or competitive with the drugs or drug candidates that are the subject of their collaborations with us. For example, Janssen is evaluating a potentially competitive HCV protease inhibitor in Phase 3 clinical trials, which could increase the likelihood that Janssen would terminate our collaboration or apply fewer resources to the commercialization of INCIVO.
- Our collaboration agreements are subject to termination under various circumstances, including, as in the case of our agreement with Janssen, termination without cause. Any such termination by Janssen could have a material adverse effect on our financial condition and/or disrupt the commercial sale of INCIVO in Janssen's territories.

We depend on third-party manufacturers, including sole source suppliers, to manufacture our products and the materials we require for our clinical trials. We may not be able to maintain these relationships and could experience supply disruptions outside of our control.

We rely on a worldwide network of third-party manufacturers to manufacture and distribute INCIVEK (telaprevir) and KALYDECO (ivacaftor) for commercial sale and post-approval clinical trials, and our drug candidates for clinical trials. As a result of our reliance on these third-party manufacturers and suppliers, including sole source suppliers of certain components of our products and drug candidates, we could be subject to significant supply disruptions outside of our control. Our supply chain for sourcing raw materials and manufacturing drug product ready for distribution is a multi-step international endeavor. Third-party contract manufacturers, including some in China, supply us with raw materials, and contract manufacturers in the European Union and the United States convert these raw materials into drug substance and convert the drug substance into final dosage form. Establishing and managing this global supply chain requires a significant financial commitment and the creation and maintenance of numerous third-party contractual relationships. Although we attempt to effectively manage the business relationships with companies in our supply chain, we do not have control over their operations.

We require a supply of INCIVEK for sale in North America. We believe there are multiple third parties capable of providing most of the materials and services we need in order to manufacture and distribute INCIVEK. It is also possible that supply of materials that can not be second-sourced can be managed with inventory planning. If we underestimate demand, our manufacturing capacity through third-party manufacturers may not be sufficient. Also, while we believe we can effectively forecast demand for INCIVEK, we have limited flexibility to adjust our supply in response to changes in demand, due to the significant lead times required to manufacture INCIVEK.

We require a supply of KALYDECO in the United States, and we will require a supply of ivacaftor for sale in international markets if we obtain marketing approvals outside of the United States. We are in the process of establishing secondary sources for our KALYDECO supply needs. Holders of market exclusivity for orphan drugs such as KALYDECO are expected to assure the availability of sufficient quantities of their orphan drugs to meet the needs of patients.

Supply disruptions may result from a number of factors, including shortages in product raw materials, labor or technical difficulties, regulatory inspections or restrictions, shipping or customs delays or any other performance failure by any third-party manufacturer on which we rely. Any supply disruptions could disrupt sales of our products and/or the timing of our clinical trials. Furthermore, we may be required to modify our production methods to permit us to economically manufacture our drugs for sale and our drug candidates for clinical trials. These modifications may require us to re-evaluate our resources and the resources of our third-party manufacturers, which could result in abrupt changes in our production methods and supplies.

In the course of providing its services, a contract manufacturer may develop process technology related to the manufacture of our products or drug candidates that the manufacturer owns, either independently or jointly with us. This would increase our reliance on that manufacturer or require us to

obtain a license from that manufacturer in order to have our products or drug candidates manufactured by other suppliers utilizing the same process.

We may not be able to attract collaborators for the development and commercialization of our drug candidates.

As part of our ongoing strategy, we may seek additional collaborative arrangements. We have a number of research programs and early-stage and mid-stage clinical development programs. At any time, we may determine that in order to continue development of a drug candidate or program or successfully commercialize a drug we need to identify a collaborator. Potentially, and depending on the circumstances, we may desire that a collaborator either agree to fund portions of a drug development program led by us, or agree to provide all the funding and directly lead the development and commercialization of a program. No assurance can be given that any efforts we make to seek additional collaborative arrangements will be successfully completed on a timely basis or at all. If we are unable to enter into acceptable collaborative relationships, one or more of our development programs could be delayed or terminated and the possibility of our receiving a return on our investment in the program could be impaired.

We rely on third parties to conduct our clinical trials, and those third parties may not perform satisfactorily, including failing to meet established deadlines for the completion of such trials or regulatory requirements.

We rely on third parties such as contract research organizations to help manage our clinical trial process and on medical institutions and clinical investigators to enroll qualified patients and conduct our clinical trials. Our reliance on these third parties for clinical development activities reduces our control over these activities. Accordingly, these third-party contractors may not complete activities on schedule, or may not conduct our clinical trials in accordance with regulatory requirements or our trial design. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may be required to replace them. Although we believe that there are a number of other third-party contractors we could engage to continue these activities, it may result in a delay of the affected trial. If clinical trials are not conducted in accordance with our contractual expectations or regulatory requirements, action by regulatory authorities might significantly and adversely affect the conduct or progress of these trials or in specific circumstances might result in a requirement that a trial be redone. Accordingly, our efforts to obtain regulatory approvals for and commercialize our drug candidates could be delayed.

Risks Related to Intellectual Property

If our patents do not protect our drugs, or our drugs infringe third-party patents, we could be subject to litigation and substantial liabilities.

We have numerous issued patents and patent applications pending in the United States, as well as counterparts in other countries. Our success will depend, in significant part, on our ability to obtain and maintain United States and foreign patent protection for our drugs, their uses and our processes, to preserve our trade secrets and to operate without infringing the proprietary rights of third parties. In particular, we believe that composition-of-matter claims are the most significant patent claims for companies in our segment of the pharmaceutical industry that focus on small molecule drug candidates that are new chemical compounds. While we have patents or patent applications with composition-of-matter claims for each of our products and clinical drug candidates, only a portion of these patents have been granted. We cannot be certain that any patents will issue from our patent applications or, even if patents issue or have issued, that the issued claims will provide us with any significant protection against competitive products or otherwise be valuable commercially.

Due to evolving legal standards relating to the patentability, validity and enforceability of patents covering pharmaceutical inventions and the scope of claims made under these patents, our ability to

maintain, obtain and enforce patents is uncertain and involves complex legal and factual questions. U.S. and foreign patent applications typically are maintained in confidence for a period of time after they initially are filed with the applicable patent office. Similarly, publication of discoveries in the scientific literature often lag behind actual discoveries. Consequently, we cannot be certain that we or our licensors were the first to invent, or the first to file patent applications on, our products or drug candidates or their use. If a third party also has filed a U.S. patent application relating to our products or drug candidates or a similar invention, we may have to participate in interference proceedings to determine priority of invention and could lose our patent position. Furthermore, we may not have identified all U.S. and foreign patents or published applications that affect our business by blocking our ability to commercialize our drugs or drug candidates.

Our patents may be challenged by third parties, resulting in the patent being deemed invalid, unenforceable or narrowed in scope, or the third party may circumvent any such issued patents. Also, our pending patent applications may not issue, and we may not receive any additional patents. Our patents might not contain claims that are sufficiently broad to prevent others from utilizing our technologies. For instance, the issued patents relating to our products or drug candidates may be limited to a particular molecule or molecules and may not cover similar molecules that have similar clinical properties. Consequently, our competitors may independently develop competing products that do not infringe our patents or other intellectual property.

The laws of many foreign jurisdictions do not protect intellectual property rights to the same extent as in the United States and many companies have encountered significant difficulties in protecting and defending such rights in foreign jurisdictions. If we encounter such difficulties in protecting or are otherwise precluded from effectively protecting our intellectual property rights in foreign jurisdictions, our business could be substantially harmed.

Because of the extensive time required for development, testing and regulatory review of a drug candidate, it is possible that, before any of our drug candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization of our drug candidates, thereby reducing any advantages of the patent. To the extent our drug candidates are not commercialized significantly ahead of the expiration date of any applicable patent, or to the extent we have no other patent protection on such drug candidates, those drug candidates would not be protected by patents, and we would then rely solely on other forms of exclusivity, such as regulatory exclusivity provided by the FDCA.

Risks Related To Our Operations

Our business has a substantial risk of product liability claims. If we are unable to obtain appropriate levels of insurance, product liability claims could adversely affect our business.

Our business exposes us to significant potential product liability risks that are inherent in the development, clinical testing, manufacturing and sales and marketing of human therapeutic products. We have product liability insurance and clinical trial insurance in amounts that we believe are adequate to cover this risk. However, our insurance may not provide adequate coverage against potential liabilities. If a claim is brought against us, we might be required to pay legal and other expenses to defend the claim, as well as pay uncovered damages awards resulting from a claim brought successfully against us and these damages could be significant and have a material adverse effect on our financial condition. Furthermore, whether or not we are ultimately successful in defending any such claims, we might be required to direct significant financial and managerial resources to such defense, and adverse publicity is likely to result.

Risks associated with operating in foreign countries could materially adversely affect our business.

We have expanded our operations in Canada in order to market INCIVEK (telaprevir) and ivacaftor, if approved, in that country, and in Europe in order to market ivacaftor internationally, if approved. A significant portion of our commercial supply chain, including sourcing of raw materials and manufacturing, is located in China, Japan and the European Union. Consequently, we are, and will continue to be, subject to risks related to operating in foreign countries. Risks associated with conducting operations in foreign countries include:

- differing regulatory requirements for drug approvals and regulation of approved drugs in foreign countries;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses or reduced revenues, and other obligations incident to doing business or operating in another country;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with our international operations could materially adversely affect our business.

In addition, our international operations are subject to regulation under United States law. For example, the Foreign Corrupt Practices Act prohibits United States companies and their representatives from offering, promising, authorizing or making payments to foreign officials for the purpose of obtaining or retaining business abroad. In many countries, the health care professionals we regularly interact with may meet the definition of a foreign government official for purposes of the Foreign Corrupt Practices Act. We also are subject to import/export control laws. Failure to comply with domestic or foreign laws could result in various adverse consequences, including the possible delay in approval or refusal to approve a product, recalls, seizures, withdrawal of an approved product from the market, the imposition of civil or criminal sanctions, the prosecution of executives overseeing our international operations and corresponding bad publicity and negative perception of our company in foreign countries.

If we acquire or license technologies, resources or drug candidates, we will incur a variety of costs and may never realize benefits from the transaction.

If appropriate opportunities become available, we might license or acquire technologies, resources, drugs or drug candidates. We might never realize the anticipated benefits of such a transaction or we may later incur impairment charges related to assets acquired in any such transaction. In particular, due to the risks inherent in drug development, we may not successfully develop or obtain marketing approval for the drug candidates we acquire. For example, we incurred a \$105.8 million impairment charge in the third quarter of 2011 in connection with VX-759, which we obtained through our 2009 acquisition of ViroChem. Future licenses or acquisitions could result in potentially dilutive issuances of

equity securities, the incurrence of debt, the creation of contingent liabilities, impairment expenses related to goodwill, and impairment or amortization expenses related to other intangible assets, which could harm our financial condition.

If we fail to manage our growth effectively, our business may suffer.

The number of our employees increased by approximately 18% in each of 2011 and 2010, and we expect to experience additional growth in 2012. Because our drug discovery and development activities are highly technical in nature, we require the services of highly qualified and trained scientists who have the skills necessary to conduct these activities. In addition, we need to attract and retain employees with experience in marketing and commercialization of medicines. We are planning to move from Cambridge, Massachusetts to Boston, Massachusetts, and this move must be managed successfully to avoid disruption to our business. While we do not expect the move to result in significant turnover, we cannot be sure that we will be able to retain all our key scientific, commercial and management employees. We face intense competition for our personnel from our competitors and other companies throughout our industry. Moreover, the growth of local biotechnology companies and the expansion of major pharmaceutical companies into the Boston area have increased competition for the available pool of skilled employees, especially in technical fields, and the high cost of living in the Boston and San Diego areas makes it difficult to attract employees from other parts of the country to these areas. Our ability to commercialize our products, and achieve our research and development objectives, depends on our ability to respond effectively to these demands and expand our internal organization to accommodate anticipated growth. If we are unable to hire qualified personnel or manage our growth effectively, there could be a material adverse effect on our business.

The loss of the services of key employees or the failure to effectively integrate key employees could negatively affect our business and future growth.

Our future success will depend in large part on our ability to retain the services of our key scientific and management personnel and to integrate new scientific and management personnel into our business. A loss of key personnel or a failure to properly integrate new personnel could be disruptive. We have entered into employment agreements with some executives and provide compensation-related benefits to all of our key employees that vest over time and therefore induce them to remain with us. However, the employment agreements can be terminated by the executive on relatively short notice. The value to employees of stock-related benefits that vest over time—such as options and restricted stock—is significantly affected by movements in our stock price, and may at any point in time be insufficient to counteract more lucrative offers from other companies. A failure to retain, as well as hire, train and effectively integrate into our organization a sufficient number of qualified scientists, professionals, sales personnel and senior management would negatively affect our business and our ability to grow our business.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

Our research and development efforts involve the controlled use of hazardous materials, chemicals and various radioactive compounds. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards prescribed by state, federal and foreign regulations, the risk of accidental contamination or injury from these materials can not be eliminated. If an accident occurs, we could be held liable for resulting damages, which could be substantial. We also are subject to numerous environmental, health and workplace safety laws and regulations, including those governing laboratory procedures, exposure to blood-borne pathogens and the handling of biohazardous materials. Although we maintain workers' compensation insurance to cover us for costs we may incur due to injuries to our employees resulting from the use of these materials, this insurance may not provide adequate coverage against potential liabilities. We maintain insurance to cover

pollution conditions or other extraordinary or unanticipated events relating to our use and disposal of hazardous materials that we believe is appropriate based on the small amount of hazardous materials we generate. Additional federal, state and local laws and regulations affecting our operations may be adopted in the future. We may incur substantial costs to comply with, and substantial fines or penalties if we violate, any of these laws or regulations.

Risks Related to Holding Our Common Stock and Potential Financing Activities

Our stock price may fluctuate.

Market prices for securities of companies such as ours are highly volatile. From January 1, 2010 to December 31, 2011, our common stock traded between \$26.50 and \$58.87 per share. The market for our stock, like that of other companies in the pharmaceuticals industry, has from time to time experienced significant price and volume fluctuations. The future market price of our securities could be significantly and adversely affected by factors such as:

- the information contained in our quarterly earnings releases, including our net product revenues, royalty revenues and operating expenses for completed periods and guidance regarding future periods;
- prescription data and other information disclosed by third-parties regarding our business or products;
- announcements of FDA actions with respect to our drugs or our competitors' drugs, or regulatory filings for our drug candidates or those of our competitors or of results of clinical trials or nonclinical studies relating to our drugs, drug candidates or those of our competitors;
- technological innovations or the introduction of new drugs by our competitors;
- government regulatory action;
- public concern as to the safety of drugs developed by us or our competitors;
- developments in patent or other intellectual property rights or announcements relating to these matters;
- developments in domestic and international governmental policy or regulation, for example relating to intellectual property rights;
- developments relating specifically to other companies and market conditions for pharmaceutical and biotechnology stocks or stocks in general;
- business development, capital structuring or financing activities; and
- general worldwide or national economic, political and capital market conditions.

Our quarterly operating results are subject to significant fluctuation.

Our operating results have fluctuated from quarter to quarter in the past, and we expect that they will continue to do so in the future. Factors that have caused quarterly fluctuations in the past include variable amounts of product revenues and collaboration revenues, impairment charges and changes in the fair value of derivative instruments. We cannot accurately predict our future revenues from our products and our revenues from our products could vary on a quarterly basis. Our revenues from our products, and in particular INCIVEK (telaprevir), may be affected by, among other factors, seasonality and the timing of orders from our significant distributors. Our quarterly results also could be significantly affected by any future impairment charges we take with respect to intangible assets and changes in the fair value of contingent milestone and royalty payments pursuant to our collaboration agreement with Alios. Most of our operating expenses relate to our research and development activities, do not vary directly with the amount of revenues and are difficult to adjust in the short term. As a result, if revenues in a particular quarter are below expectations, we are unlikely to proportionately reduce operating expenses for that quarter.

These examples are only illustrative and other risks, including those discussed in these "Risk Factors," could also cause fluctuations in our reported financial results. Our operating results during any one period do not necessarily suggest the results of future periods.

We expect that results from our clinical development activities and the clinical development activities of our competitors will continue to be released periodically, and may result in significant volatility in the price of our common stock.

Any new information regarding our products and drug candidates or competitive products or potentially competitive drug candidates, and in particular any new information regarding INCIVEK and competitive HCV products or potentially competitive HCV drug candidates, can substantially affect investors' perceptions regarding our future prospects. We, our collaborators and our competitors periodically provide updates regarding drug development programs, typically through press releases, conference calls and presentations at medical conferences. These periodic updates often include interim or final results from clinical trials conducted by us or our competitors and/or information about our or our competitors' expectations regarding regulatory filings and submissions as well as future clinical development of our products or drug candidates, competitive products or potentially competitive drug candidates. The timing of the release of information by us regarding our drug development programs is often beyond our control and is influenced by the timing of receipt of data from our clinical trials and by the general preference among pharmaceutical companies to disclose clinical data during medical conferences. In addition, the information that we and our competitors disclose about these trials may be based on interim rather than final data that may involve interpretation difficulties and may in any event not accurately predict final results.

We may need to raise additional capital that may not be available.

Although we do not have any plans to do so in the near term, we may in the future need to raise additional capital. Any potential public offering or private placement may or may not be similar to the transactions that we have completed in the past. Any debt financing may be on terms that, among other things, include conversion features that could result in dilution to our then-existing security holders and restrict our ability to pay interest and dividends—although we do not intend to pay dividends for the foreseeable future. Any equity financings would result in dilution to our then-existing security holders. If adequate funds are not available on acceptable terms, or at all, we may be required to curtail significantly or discontinue one or more of our research, drug discovery or development programs, including clinical trials, incur significant cash exit costs, or attempt to obtain funds through arrangements with collaborators or others that may require us to relinquish rights to certain of our technologies, drugs or drug candidates. Based on many factors, including general economic conditions, additional financing may not be available on acceptable terms, if at all.

Outstanding indebtedness may make it more difficult to obtain additional financing or reduce our flexibility to act in our best interests.

We are obligated to repay an aggregate of \$400.0 million for our convertible senior subordinated notes due 2015, or 2015 Notes, no later than October 1, 2015. We also are obligated to make semi-annual interest payments on the outstanding principal amount of the 2015 Notes. We may issue additional convertible debt or incur other types of indebtedness in the future. The level of our indebtedness could affect us by:

- making it more difficult to obtain additional financing for working capital, capital expenditures, debt service requirements or other purposes;
- shortening the duration of available revolving credit because lenders may seek to avoid conflicting maturity dates;

- constraining our ability to react quickly in an unfavorable economic climate or to changes in our business or the pharmaceutical industry; or
- potentially requiring the dedication of substantial amounts to service the repayment of outstanding debt, including periodic interest payments, thereby reducing the amount of cash available for other purposes.

Issuances of additional shares of our common stock could cause the price of our common stock to decline.

As of December 31, 2011, we had 209.3 million shares of common stock issued and outstanding. As of December 31, 2011, we also had outstanding options to purchase 20.9 million shares of common stock with a weighted-average exercise price of \$34.23 per share and 8.2 million shares of common stock issuable upon conversion of our 2015 Notes, at a conversion price of approximately \$48.83 per share. Outstanding vested options are likely to be exercised if the market price of our common stock exceeds the applicable exercise price, and, in the future, we expect to issue additional options and restricted stock to employees. In addition, we may issue additional common stock or restricted securities in the future as part of financing activities or business development activities and any such issuances may have a dilutive effect on existing shareholders. Sales of substantial amounts of our common stock in the open market, or the availability of such shares for sale, could adversely affect the price of our common stock. In addition, the issuance of restricted common stock or common stock upon exercise of any outstanding options would be dilutive, and may cause the market price for a share of our common stock to decline.

We have adopted anti-takeover provisions and are subject to Massachusetts corporate laws that may frustrate any attempt to remove or replace our current management or effectuate a business combination involving Vertex.

Our corporate charter and by-law provisions and Massachusetts state laws may discourage certain types of transactions involving an actual or potential change of control of Vertex that might be beneficial to us or our security holders. Our charter provides for staggered terms for the members of the Board of Directors. Our by-laws grant the directors a right to adjourn annual meetings of shareholders, and certain provisions of our by-laws may be amended only with an 80% shareholder vote. We may issue shares of any class or series of preferred stock in the future without shareholder approval and upon such terms as our Board of Directors may determine. The rights of the holders of common stock will be subject to, and may be adversely affected by, the rights of the holders of any class or series of preferred stock that may be issued in the future. Massachusetts state law prohibits us from engaging in specified business combinations, unless the combination is approved or consummated in a prescribed manner, and prohibits voting by any shareholder who acquires 20% or more of our voting stock without shareholder approval. As a result, shareholders or other parties may find it more difficult to remove or replace our current management.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K and, in particular, the description of our Business set forth in Item 1, the Risk Factors set forth in this Item 1A and our Management's Discussion and Analysis of Financial Condition and Results of Operations set forth in Item 7 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:

- 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 product revenues from sales of INCIVEK and KALYDECO and royalty revenues from net sales of INCIVO and to the intangible assets associated with the ViroChem acquisition and the Alios collaboration;
- our expectations regarding clinical trials, development timelines and regulatory authority filings and submissions for VX-222, ALS-2200, ALS-2158, VX-809, VX-661, VX-509, VX-765, VX-787 and our other drug candidates;
- our ability to successfully market INCIVEK and/or KALYDECO or any of our other drug candidates if we obtain regulatory approval;
- our expectations regarding the timing and structure of clinical trials of our drugs and drug candidates, including INCIVEK, KALYDECO, VX-222, ALS-2200, ALS-2158, VX-809, VX-661, VX-509, VX-765 and VX-787, and the expected timing of our receipt of data from our and our collaborators' 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 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;
- the focus of our drug development efforts and our financial and management resources and our plan to continue investing in our research and development programs and to develop and commercialize selected drug candidates that emerge from those programs, alone or with third-party collaborators;
- the establishment, development and maintenance of collaborative relationships;
- potential business development activities;
- our ability to use our research programs to identify and develop new drug candidates to address serious diseases and significant unmet medical needs;
- our estimates regarding obligations associated with a lease of a facility in Kendall Square, Cambridge, Massachusetts; and
- our liquidity and our expectations regarding the possibility of raising additional capital.

Any or all of our forward-looking statements in this Annual Report on Form 10-K 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 Annual Report on Form 10-K 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" above in this Item 1A. 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, including the factors and uncertainties set forth under "Risk Factors" above in this Item 1A. 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 1B. UNRESOLVED STAFF COMMENTS

We did not receive any written comments from the Securities and Exchange Commission prior to the date 180 days before the end of the fiscal year ended December 31, 2011 regarding our filings under the Securities Exchange Act of 1934, as amended, that have not been resolved.

ITEM 2. PROPERTIES

We lease an aggregate of approximately 1.1 million square feet of laboratory and office space in facilities located in Massachusetts, California, Washington, DC, Iowa, Canada, Switzerland and the United Kingdom. We believe our facilities are adequate for our current needs.

Massachusetts

We lease an aggregate of 870,000 square feet of space in eleven facilities situated in close proximity to our corporate headquarters located at 130 Waverly Street in Cambridge, Massachusetts. We lease approximately 100,000 square feet of laboratory and office space for our 130 Waverly Street corporate headquarters and approximately 192,000 square feet of laboratory and office space at 200 Sidney Street, located adjacent to our corporate headquarters. The 130 Waverly Street and 200 Sidney Street leases expire on December 31, 2015, with two options to extend for additional consecutive five-year terms, and an option to terminate the lease in December 2013, subject to certain advance notice provisions. We sublease approximately 145,000 square feet at 88 Sidney Street, Cambridge, Massachusetts, as subtenant to Alkermes, Inc. who is the prime tenant in the building; this lease expires in June 2012. Vertex has entered into a master lease with the landlord for 88 Sidney Street that commences in June 2012 and expires in June 2014. We also lease approximately 56,000 square feet of office space at One Marina Park Drive, Boston, Massachusetts. This is a five year lease with one option to extend for either five or ten years.

The lease for our Kendall Square, Cambridge, Massachusetts facility will expire in 2018. We have the option to extend this lease for two consecutive ten-year terms. We have subleased approximately 145,000 square feet of the Kendall Square facility, and are using the remaining square feet of space we lease in the facility for our research operations. The subleases are for terms ending in 2015, with one sublease having an extension option to 2018.

We are planning to consolidate our headquarters operations in Massachusetts into one campus in Boston, Massachusetts. In May 2011, we entered into two leases pursuant to which we agreed to lease approximately 1.1 million square feet of office and laboratory space in two buildings being built in Boston, Massachusetts. We expect that the leases will commence upon completion of the buildings, scheduled for late 2013, and will extend for 15 years from the commencement date. We have an option to extend the term of the leases for an additional ten years.

California

We lease approximately 81,000 square feet of laboratory and office space in San Diego, California. The lease for this space will expire in September 2013.

Canada

We lease approximately 63,000 square feet of laboratory and office space in Montreal, Canada. The lease for this space will expire in April 2016.

United Kingdom

We lease approximately 22,000 square feet of laboratory and office space in Milton Park, Abingdon, England, for our United Kingdom business and research and development activities, under a lease expiring in 2013. We lease an additional 41,000 square feet of laboratory and office space in Milton Park under a lease with a term that expires in 2024. This lease has certain termination provisions in 2014 and 2019.

ITEM 3. LEGAL PROCEEDINGS

We are not a party to any material legal proceedings. We are not a party to any litigation in any court with any governmental authority, and management is not aware of any contemplated proceeding by any governmental authority against us.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock is traded on The NASDAQ Global Select Market under the symbol "VRTX." The following table sets forth for the periods indicated the high and low sale prices per share of our common stock as reported by NASDAQ Stock Market LLC:

<u>Year Ended December 31, 2011:</u>	<u>High</u>	<u>Low</u>
First quarter	\$ 52.13	\$ 35.19
Second quarter	58.87	44.57
Third quarter	54.38	39.06
Fourth quarter	45.26	26.50

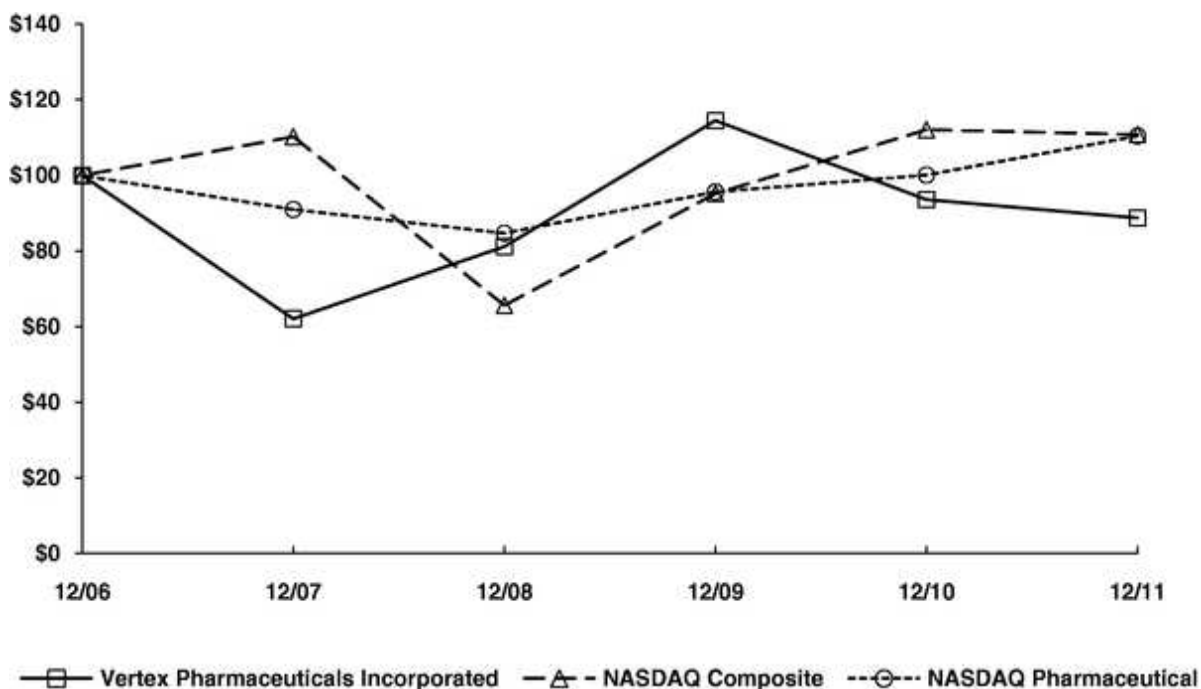
<u>Year Ended December 31, 2010:</u>		
First quarter	\$ 44.24	\$ 36.15
Second quarter	41.62	32.41
Third quarter	37.95	31.25
Fourth quarter	38.70	32.08

Stockholders

As of February 8, 2012, there were 2,157 holders of record of our common stock.

Performance Graph

CUMULATIVE TOTAL RETURN
Based on Initial Investment of \$100 on December 31, 2006
with dividends reinvested (fiscal years ended December 31)





Dividends

We have never declared or paid any cash dividends on our common stock, and we currently expect that any future earnings will be retained for use in our business. Additionally, the credit agreement we entered into in January 2011 restricts our ability to declare or pay dividends in certain circumstances.

Issuer Repurchases of Equity Securities

The table set forth below shows all repurchases of securities by us during the three months ended December 31, 2011:

<u>Period</u>	<u>Total Number of Shares Purchased</u>	<u>Average Price Paid per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs</u>	<u>Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs</u>
Oct. 1, 2011 to Oct. 31, 2011	26,543	\$ 0.01	—	—
Nov. 1, 2011 to Nov. 30, 2011	39,476	\$ 0.01	—	—
Dec. 1, 2011 to Dec. 31, 2011	11,337	\$ 0.01	—	—

The repurchases were made under the terms of our Amended and Restated 2006 Stock and Option Plan. Under this plan, 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 returned to the Amended and Restated 2006 Stock and Option Plan are available for future awards under the terms of that plan.

ITEM 6. SELECTED FINANCIAL DATA

The following unaudited selected consolidated financial data are derived from our audited consolidated financial statements. These data should be read in conjunction with our audited consolidated financial statements and related notes that are included elsewhere in this Annual Report on Form 10-K and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Item 7 below.

	Year Ended December 31,				
	2011	2010	2009	2008	2007
(in thousands, except per share amounts)					
Consolidated Statements of Operations Data:					
Revenues:					
Product revenues, net	\$ 950,889	\$ —	\$ —	\$ —	\$ —
Royalty revenues	50,015	30,244	28,320	37,483	47,973
Collaborative revenues	409,722	113,126	73,569	138,021	151,039
Total revenues	<u>1,410,626</u>	<u>143,370</u>	<u>101,889</u>	<u>175,504</u>	<u>199,012</u>
Costs and expenses:					
Cost of product revenues	63,625	—	—	—	—
Royalty expenses	16,880	12,730	14,202	15,686	13,904
Research and development expenses	707,706	637,416	550,274	516,912	519,227
Sales, general and administrative expenses	400,721	187,800	130,192	101,290	78,554
Restructuring expense	2,074	1,501	6,240	4,324	7,119
Intangible asset impairment charge(1)	105,800	—	7,200	—	—
Acquisition-related expenses(1)	—	—	7,793	—	—
Total costs and expenses	<u>1,296,806</u>	<u>839,447</u>	<u>715,901</u>	<u>638,212</u>	<u>618,804</u>
Income (loss) from operations	113,820	(696,077)	(614,012)	(462,708)	(419,792)
Interest income (expense), net	(36,574)	(17,320)	(8,182)	2,857	28,513
Change in fair value of derivative instruments(2)	(16,801)	(41,229)	(1,847)	—	—
Loss on exchanges of convertible senior subordinated notes (due 2013)	—	—	(18,137)	—	—
Income (loss) before provision for income taxes	60,445	(754,626)	(642,178)	(459,851)	(391,279)
Provision for income taxes	19,266	—	—	—	—
Net income (loss)	<u>41,179</u>	<u>(754,626)</u>	<u>(642,178)</u>	<u>(459,851)</u>	<u>(391,279)</u>
Net income attributable to noncontrolling interest (Alios)(3)	11,605	—	—	—	—
Net income (loss) attributable to Vertex	<u>\$ 29,574</u>	<u>\$ (754,626)</u>	<u>\$ (642,178)</u>	<u>\$ (459,851)</u>	<u>\$ (391,279)</u>
Net income (loss) per share attributable to Vertex common shareholders:					
Basic	<u>\$ 0.14</u>	<u>\$ (3.77)</u>	<u>\$ (3.71)</u>	<u>\$ (3.27)</u>	<u>\$ (3.03)</u>
Diluted	<u>\$ 0.14</u>	<u>\$ (3.77)</u>	<u>\$ (3.71)</u>	<u>\$ (3.27)</u>	<u>\$ (3.03)</u>
Shares used in per share calculations:					
Basic	<u>204,891</u>	<u>200,402</u>	<u>173,259</u>	<u>140,556</u>	<u>128,986</u>
Diluted	<u>208,807</u>	<u>200,402</u>	<u>173,259</u>	<u>140,556</u>	<u>128,986</u>

	As of December 31,				
	2011	2010	2009	2008	2007
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable securities	\$ 968,922	\$ 1,031,411	\$ 1,284,913	\$ 832,101	\$ 467,796
Accounts receivable, net	183,135	12,529	9,601	23,489	31,320
Inventories	112,430	—	—	—	—
Intangible assets(1)(3)	663,500	518,700	518,700	—	—
Goodwill(1)(3)	30,992	26,102	26,102	—	—
Total assets	<u>\$ 2,204,280</u>	<u>\$ 1,725,446</u>	<u>\$ 1,955,488</u>	<u>\$ 980,479</u>	<u>\$ 601,477</u>
Total current liabilities	<u>\$ 392,348</u>	<u>\$ 474,783</u>	<u>\$ 284,883</u>	<u>\$ 216,564</u>	<u>\$ 199,279</u>
Convertible senior subordinated notes (due 2013), net of current portion	—	—	—	287,500	—
Convertible senior subordinated notes (due 2015)	400,000	400,000	—	—	—
Secured notes (due 2012) and liability related to sale of milestone payments, net of current portion(2)	—	—	159,972	—	—
Deferred tax liability(1)(3)	243,707	160,278	160,278	—	—
Other liabilities, net of current portion	202,713	186,412	254,009	237,541	130,903
Noncontrolling interest (Alios)(3)	178,669	—	—	—	—
Vertex shareholders' equity	786,843	503,973	1,096,346	238,874	271,295
Total liabilities and shareholders' equity	<u>\$ 2,204,280</u>	<u>\$ 1,725,446</u>	<u>\$ 1,955,488</u>	<u>\$ 980,479</u>	<u>\$ 601,477</u>

- (1) The intangible asset impairment charge, acquisition-related expenses, and a portion of the intangible assets, goodwill and deferred tax liability reflected in the selected financial data relate to our acquisition of ViroChem in 2009. See Note C to our consolidated financial statements included in this Annual Report on Form 10-K.
- (2) The change in fair value of derivative instruments, secured notes (due 2012) and liability related to sale of milestone payments reflected in the selected financial data relate to two financial transactions that we entered into in September 2009. As of December 31, 2010, the secured notes (due 2012) and the liability related to sale of milestone payments were included in total current liabilities. See Note N to our consolidated financial statements included in this Annual Report on Form 10-K.
- (3) Net income attributable to noncontrolling interest (Alios), noncontrolling interest (Alios) and a portion of the intangible assets, goodwill and deferred tax liability reflected in the selected financial data relate to our collaboration with Alios, which was entered into in 2011. See Note B to our consolidated financial statements included in this Annual Report on Form 10-K.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

We are in the business of discovering, developing, manufacturing and commercializing small molecule drugs for the treatment of serious diseases. Our two products are INCIVEK™ (telaprevir), which is approved in the United States and Canada for the treatment of adults with genotype 1 hepatitis C virus, or HCV, infection, and KALYDECO™ (ivacaftor), which is approved in the United States for the treatment of patients six years of age or older with cystic fibrosis, or CF, who have a specific genetic mutation that is referred to as the G551D mutation. We began marketing INCIVEK in the United States in May 2011. Our collaborator, Janssen Pharmaceutica, N.V., or Janssen, began marketing telaprevir in its territories under the brand name INCIVO™ in September 2011. Our collaborator, Mitsubishi Tanabe Pharma Corporation, or Mitsubishi Tanabe, obtained marketing approval for telaprevir from the Japanese Ministry of Health, Labor and Welfare in September 2011. We began marketing KALYDECO in the United States in January 2012, and we expect to obtain approval to market ivacaftor in the European Union later in 2012.

We generated earnings as a cashflow positive company in the second half of 2011 after experiencing significant losses in 2009, 2010 and the first half of 2011. In the second half of 2011, we had net income attributable to us of \$379.7 million and our cash, cash equivalents and marketable securities increased by \$375.4 million. We recognized net product revenues on sales of INCIVEK of \$419.6 million and \$456.8 million, respectively, in the third and fourth quarters of 2011. We began recognizing royalty revenues from commercial sales of INCIVO by Janssen in September 2011, and we will begin to recognize revenues from sales of KALYDECO in the first quarter of 2012. In order to maintain profitability and continue our strategic investment in research and development activities, we will need to continue to generate significant revenues in future periods.

We have ongoing clinical programs involving drug candidates intended for the treatment of HCV infection, CF, rheumatoid arthritis, epilepsy and influenza. Our HCV clinical programs are focused on developing all-oral, interferon-free combinations of HCV drugs and drug candidates that have the potential to further improve treatment options available to patients with HCV infection. In our CF program, we are investigating the use of ivacaftor as a monotherapy in additional populations of patients with CF and combinations of ivacaftor and our other CF drug candidates, with the goal of expanding the group of patients with CF who can benefit from our medicines. We believe that our longer-term success will depend on our ability to continue to generate and develop innovative compounds for the treatment of serious diseases. As a result, we expect to continue investing in research programs directed toward the identification of new drug candidates and to develop and commercialize selected drug candidates that emerge from those programs, alone or with third-party collaborators.

Commercialization and Competition

We believe that by focusing on serious diseases and innovative drugs that have the potential to provide significant advantages over existing therapies, we can increase the likelihood that our drug candidates, if approved, will be commercially successful. Our marketing efforts for INCIVEK in the United States have focused on establishing an effective sales force and managed markets organization to promote INCIVEK to health care providers and payors; implementing appropriate marketing, distribution and pricing strategies; and maintaining appropriate and sustained levels of INCIVEK inventory.

We believe that initial sales of INCIVEK have confirmed its commercially competitive profile, and to date a significant group of patients with genotype 1 HCV infection have sought treatment with an INCIVEK-based treatment regimen. We and Janssen are competing with Merck & Co., Inc.'s VICTRELIS™ (boceprevir), another HCV protease inhibitor that was approved for sale in the United

States and Europe in 2011. In the United States, we believe over 25,000 patients were treated with INCIVEK in 2011. We believe that sales of INCIVEK will be subject to some seasonal fluctuations as, for example, historically fewer patients have started treatment for HCV infection during late November and December than during other periods of the year. However, the sales of drugs that obtain initial market acceptance may decline for a variety of reasons, including increased competition from currently approved competitive drugs, the introduction of new competitive drugs, adverse information regarding the safety characteristics or efficacy of the drug or significant new information regarding potential future treatment regimens that are being evaluated in clinical trials.

We, along with a number of competitors, are pursuing development programs involving all-oral combinations of HCV drugs and drug candidates with the goal of developing improved treatment regimens for HCV infection that could render the current treatments, which include the administration of pegylated-interferon, or peg-IFN, by injection, noncompetitive. In particular, each of Bristol-Myers Squibb Company and Gilead Sciences, Inc. is actively pursuing all-oral treatment regimens for HCV infection that would include an HCV nucleotide analogue and Bristol-Myers Squibb and Medivir AB are evaluating a combination of an HCV protease inhibitor and an HCV NS5A inhibitor. To date, potential all-oral treatment regimens have been evaluated in Phase 2 clinical trials involving relatively small numbers of patients. However, we expect that one or more companies may begin registration programs evaluating potential all-oral combination regimens for the treatment of genotype 1 HCV infection in 2012. While the development and regulatory timelines for these drug candidates are highly subjective and subject to change, we believe that substantial additional clinical data regarding these drug candidates and potential all-oral treatment regimens will become available in 2012 and 2013 and that one or more all-oral treatment regimens could enter the market as early as 2014 or 2015.

KALYDECO (ivacaftor) is a treatment for patients with CF six years of age or older who have a specific genetic mutation that is referred to as the G551D mutation. As with other marketed therapies for orphan diseases such as CF, we believe that we will be able to obtain adequate reimbursement for KALYDECO in the United States. In addition, we are focused on obtaining approval and adequate reimbursement for ivacaftor in Europe and plan to seek approval for ivacaftor in a number of other countries, including Canada and Australia. We believe that the number of patients with CF who have the G551D mutation in the *CFTR* gene is approximately 1,200 in the United States and 1,000 in Europe. We are planning to conduct three additional clinical trials to evaluate KALYDECO as a monotherapy in additional patient populations, including patients younger than six years of age and patients with other mutations in the *CFTR* gene. These clinical trials are subject to many of the same risks and uncertainties as the clinical trials for our drug candidates. Even if these clinical trials are successful, we do not expect we would obtain approval for the use of KALYDECO in additional populations until 2013 or later.

In addition to the factors described above, approved drugs continue to be subject to, among other things, numerous regulatory risks, post-approval safety monitoring and risks related to supply chain disruptions. As a result, it is difficult to predict future revenues that will be generated from sales by us of INCIVEK and KALYDECO and by Janssen of INCIVO.

Drug 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 relatively abrupt changes in focus and priority as new information becomes available and we gain additional understanding of our ongoing programs and potential new programs as well as those of our competitors.

If we believe the data from a completed registration program support approval of a drug candidate, we submit a New Drug Application to the United States Food and Drug Administration, or FDA, requesting approval to market the drug candidate in the United States. We also may seek analogous approvals from comparable regulatory authorities in foreign jurisdictions, such as a Marketing Authorization Application in the European Union. 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.

Drug Supply

We require a supply of INCIVEK and KALYDECO for sale in North America and will require a supply of ivacaftor for international sales if we are successful in obtaining marketing approval outside the United States. We rely on an international network of third parties to manufacture and distribute our products and for supplies of compounds for clinical trials, and we expect that we will continue to rely on third parties to provide these manufacturing services for the foreseeable future. Third-party contract manufacturers, including some in China, supply us with raw materials, and contract manufacturers in the European Union and the United States convert these raw materials into drug substance and convert the drug substance into final dosage form. Establishing and managing this global supply chain requires a significant financial commitment and the creation and maintenance of numerous third-party relationships. Although we believe we effectively manage the business relationships with companies in our supply chain, we do not have complete control over their activities. Also, while we believe we can effectively forecast demand for INCIVEK, we have limited flexibility to adjust our supply in response to changes in demand, due to the significant lead times required to manufacture INCIVEK.

Regulatory Compliance

Our marketing of pharmaceutical products, which began in May 2011, 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 the promotion of a culture of compliance. Among other laws, regulations and standards, we are subject to various federal and state 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 in exchange for, or 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.

RESULTS OF OPERATIONS

	2011	2010	2009	2011/2010 Comparison		2010/2009 Comparison	
				Increase	Increase	Increase	Increase
	(in thousands)			(in thousands, except percentages)			
Revenues	\$ 1,410,626	\$ 143,370	\$ 101,889	\$ 1,267,256	884%	\$ 41,481	41%
Operating costs and expenses	1,296,806	839,447	715,901	457,359	54%	123,546	17%
Other loss, net	(84,246)	(58,549)	(28,166)	25,697	44%	30,383	108%
Net income (loss) attributable to Vertex	\$ 29,574	\$ (754,626)	\$ (642,178)	n/a	n/a	\$ 112,448	18%

Net Income (Loss) Attributable to Vertex

In 2011, we had net income attributable to Vertex of \$29.6 million. Our increased revenues in 2011 as compared to 2010 were the result of \$950.9 million of INCIVEK net product revenues and \$318.5 million in collaborative milestone revenues for which there were no comparable revenues in 2010. Our increased revenues were partially offset by increased operating costs and expenses in 2011 as compared to 2010. The \$457.4 million increase in operating costs and expenses in 2011 as compared to 2010 was principally attributable to a \$212.9 million increase in sales, general and administrative expenses, a \$63.6 million increase in cost of product revenues and a \$105.8 million impairment charge that we incurred in the third quarter of 2011 for VX-759, a back-up non-nucleoside HCV polymerase inhibitor.

The increased net loss in 2010 as compared to 2009 was the result of significant increases in our costs and expenses, partially offset by an increase in our revenues. The increase in our operating costs and expenses during 2010 as compared to 2009 was primarily due to increased expenses for our commercial organization and increased investment in commercial supplies of telaprevir.

Our operating costs and expenses in 2011, 2010 and 2009 included \$118.2 million, \$91.1 million and \$86.7 million, respectively, of stock-based compensation expense.

Net Income (Loss) Attributable to Vertex per Diluted Share

Our net income attributable to Vertex was \$0.14 per diluted share in 2011 as compared to a net loss attributable to Vertex of (\$3.77) per diluted share in 2010 and (\$3.71) per diluted share in 2009.

Revenues

	2011	2010	2009	2011/2010 Comparison		2010/2009 Comparison	
				Increase	Increase	Increase	Increase
	(in thousands)			(in thousands, except percentages)			
Product revenues, net	\$ 950,889	\$ —	\$ —	\$ 950,889	n/a	\$ —	n/a
Royalty revenues	50,015	30,244	28,320	19,771	65%	1,924	7%
Collaborative revenues	409,722	113,126	73,569	296,596	262%	39,557	54%
Total revenues	\$ 1,410,626	\$ 143,370	\$ 101,889	\$ 1,267,256	884%	\$ 41,481	41%

Product Revenues, Net

We began recognizing net product revenues from sales of INCIVEK in the United States in the second quarter of 2011 and will begin recognizing net product revenues from sales of KALYDECO in the United States in the first quarter of 2012. We expect that our net product revenues will increase in 2012 in comparison to 2011 as we recognize INCIVEK net product revenues for a full fiscal year and begin to recognize KALYDECO net product revenues.

Royalty Revenues

Our royalty revenues increased by \$19.8 million in 2011 as compared to 2010 due to \$20.3 million of revenues recognized in 2011 from sales of INCIVO by Janssen for which there were no comparable revenues in 2010. We expect that our royalty revenues related to INCIVO will increase in 2012 as compared to 2011.

We recognized royalty revenues related to sales by GlaxoSmithKline of an HIV protease inhibitor that was discovered and developed pursuant to our collaboration with GlaxoSmithKline of \$29.7 million, \$30.2 million and \$28.3 million in 2011, 2010 and 2009, respectively. We sold our rights to these HIV royalties in 2008 for a one-time cash payment of \$160.0 million.

Collaborative Revenues

Our collaborative revenues have fluctuated significantly on an annual basis. This variability has been due to, among other things: the achievement of significant milestone revenues in 2011; the 2009 amendment of our collaboration agreement with Mitsubishi Tanabe, which provided for an up-front payment that is being recognized over the expected period of performance under that contract; the 2011 amendment to our collaboration agreement with the Cystic Fibrosis Foundation Therapeutics Incorporated, or CFFT, which began providing us additional research and development support in 2011; and variable revenues we have received from services we provided to Janssen and Mitsubishi Tanabe through our third-party manufacturing network.

The table presented below is a summary of revenues from collaborative arrangements for 2011, 2010 and 2009:

	<u>2011</u>	<u>2010</u>	<u>2009</u>
	(in thousands)		
Collaborative revenues:			
Janssen	\$ 274,393	\$ 30,750	\$ 54,640
Mitsubishi Tanabe	121,675	81,868	18,711
Other	13,654	508	218
Total collaborative revenues	<u>\$ 409,722</u>	<u>\$ 113,126</u>	<u>\$ 73,569</u>

The significant increase in our collaborative revenues from Janssen in 2011 as compared to 2010 was related to \$250.0 million in milestone payments that we recognized in 2011 for which there were no comparable revenues in 2010. The increase in revenues from Mitsubishi Tanabe in 2011 compared to 2010 was due to a \$65.0 million commercial milestone payment we recognized in 2011 partially offset by a decrease in revenues related to manufacturing services provided to Mitsubishi Tanabe through our third-party manufacturing network. Our collaborative revenues increased in 2010 as compared to 2009 because of an increase in our revenues from Mitsubishi Tanabe partially offset by a decrease in our revenues from Janssen. We expect that our collaborative revenues will decrease significantly in 2012 as compared to 2011 because there are no future milestone payments that we expect to earn pursuant to our collaboration agreements with Janssen or Mitsubishi Tanabe.

Operating Costs and Expenses

	2011	2010 (in thousands)	2009	2011/2010 Comparison		2010/2009 Comparison	
				Increase/ (Decrease)	Increase/ (Decrease)	Increase/ (Decrease)	Increase/ (Decrease)
	(in thousands)			(in thousands, except percentages)			
Cost of product revenues	\$ 63,625	\$ —	\$ —	\$ 63,625	n/a	\$ —	n/a
Royalty expenses	16,880	12,730	14,202	4,150	33%	(1,472)	(10)%
Research and development expenses	707,706	637,416	550,274	70,290	11%	87,142	16%
Sales, general and administrative expenses	400,721	187,800	130,192	212,921	113%	57,608	44%
Restructuring expense	2,074	1,501	6,240	573	38%	(4,739)	(76)%
Intangible asset impairment charge	105,800	—	7,200	105,800	n/a	(7,200)	(100)%
Acquisition-related expenses	—	—	7,793	—	n/a	(7,793)	(100)%
Total costs and expenses	<u>\$ 1,296,806</u>	<u>\$ 839,447</u>	<u>\$ 715,901</u>	<u>\$ 457,359</u>	54%	<u>\$ 123,546</u>	17%

Cost of Product Revenues

Our cost of product revenues consists of the costs of producing inventories that correspond to product revenues for the reporting period, plus the third-party royalties payable on our net sales. We expensed most of the manufacturing costs of INCIVEK sold in 2011 as research and development expenses in periods prior to January 1, 2011. We expect our cost of INCIVEK product revenues to increase as a percentage of net sales of INCIVEK in future periods.

Royalty Expenses

Royalty expenses include third-party royalties payable upon net sales of telaprevir by our collaborators and royalty expenses related to a subroyalty payable to a third party on net sales of an HIV protease inhibitor sold by GlaxoSmithKline. Royalty expenses in 2011 increased compared to 2010 because of the third-party royalties payable on net sales of INCIVO by Janssen. We expect our royalty expenses to increase in 2012 as compared to 2011 as our collaborators continue to market telaprevir in their territories.

Royalty expenses in 2010 and 2009 primarily related to a subroyalty payable to a third party on net sales of an HIV protease inhibitor sold by GlaxoSmithKline. The subroyalty expense offsets a corresponding amount of HIV royalty revenues. We expect to continue to recognize this subroyalty as an expense in future periods.

Research and Development Expenses

	2011	2010 (in thousands)	2009	2011/2010 Comparison		2010/2009 Comparison	
				Increase	Increase	Increase	Increase
	(in thousands)			(in thousands, except percentages)			
Research expenses	\$ 216,903	\$ 189,273	\$ 174,267	\$ 27,630	15%	\$ 15,006	9%
Development expenses	490,803	448,143	376,007	42,660	10%	72,136	19%
Total research and development expenses	<u>\$ 707,706</u>	<u>\$ 637,416</u>	<u>\$ 550,274</u>	<u>\$ 70,290</u>	11%	<u>\$ 87,142</u>	16%

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 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 do allocate by individual program. All research and development costs for our drugs and drug candidates are expensed as incurred.

To date, we have incurred in excess of \$4.7 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.

Over the three year period ended December 31, 2011, costs related to telaprevir have represented the largest portion of our development costs. We expect to continue to incur development costs related to the conduct of additional clinical trials to support potential supplemental applications for telaprevir and ivacaftor. Our drug candidates are still in early and mid-stage clinical development and, as a result, any estimates regarding development and regulatory timelines for these drug candidates are highly subjective and subject to change. We cannot make a meaningful estimate when, if ever, these drug candidates, including VX-222 and those we in-licensed from Alios BioPharma, Inc., or Alios, will generate revenues and cash flows.

Research Expenses

	2011	2010 (in thousands)	2009	2011/2010 Comparison		2010/2009 Comparison	
				Increase/ (Decrease)	Increase/ (Decrease)	Increase/ (Decrease)	Increase/ (Decrease)
	(in thousands)			(in thousands, except percentages)			
Research Expenses:							
Salary and benefits	\$ 76,355	\$ 67,508	\$ 63,422	\$ 8,847	13%	\$ 4,086	6%
Stock-based compensation expense	25,305	23,496	23,802	1,809	8%	(306)	(1)%
Laboratory supplies and other direct expenses	35,641	29,145	28,136	6,496	22%	1,009	4%
Contractual services	13,213	9,881	5,406	3,332	34%	4,475	83%
Infrastructure costs	66,389	59,243	53,501	7,146	12%	5,742	11%
Total research expenses	<u>\$ 216,903</u>	<u>\$ 189,273</u>	<u>\$ 174,267</u>	<u>\$ 27,630</u>	15%	<u>\$ 15,006</u>	9%

Over the past three years we have maintained a substantial investment in research activities resulting in a 15% increase in research expenses in 2011 as compared to 2010 and a 9% increase in research expenses in 2010 as compared to 2009. We expect to continue to invest in our research programs in an effort to identify additional drug candidates.

Development Expenses

	2011	2010 (in thousands)	2009	2011/2010 Comparison		2010/2009 Comparison	
				Increase/ (Decrease)	Increase/ (Decrease)	Increase/ (Decrease)	Increase/ (Decrease)
	(in thousands)			(in thousands, except percentages)			
Development Expenses:							
Salary and benefits	\$ 126,441	\$ 108,617	\$ 98,830	\$ 17,824	16%	\$ 9,787	10%
Stock-based compensation expense	50,269	41,702	40,326	8,567	21%	1,376	3%
Laboratory supplies and other direct expenses	33,588	33,231	27,682	357	1%	5,549	20%
Contractual services	149,033	113,031	111,579	36,002	32%	1,452	1%
Drug supply costs	34,133	65,902	21,591	(31,769)	(48)%	44,311	205%
Infrastructure costs	97,339	85,660	75,999	11,679	14%	9,661	13%
Total development expenses	<u>\$ 490,803</u>	<u>\$ 448,143</u>	<u>\$ 376,007</u>	<u>\$ 42,660</u>	10%	<u>\$ 72,136</u>	19%

Our total development expenses have been affected by the variable level of drug supply costs, which include costs of raw materials and work in process that are incurred before we begin capitalizing inventories for a drug candidate and costs of manufacturing services that we provided our collaborators through our third-party manufacturing network. With the approval of INCIVEK and KALYDECO, we expect drug supply costs to decrease significantly in 2012 because we began capitalizing telaprevir drug supply costs in 2011 and expect to capitalize ivacaftor drug supply costs in 2012.

Our development expenses, excluding our drug supply costs, increased by \$74.4 million, or 19%, in 2011 as compared to 2010 and by \$27.8 million, or 8%, in 2010 compared to 2009, principally due to increases in headcount and the expansion of our development efforts as we completed the registration program for telaprevir and ivacaftor, prepared the regulatory filings needed to obtain approval for these products and continued the development of our other drug candidates. We expect our development expenses to increase in 2012 as compared to 2011 because of additional clinical trials we expect to conduct to evaluate all-oral treatment regimens for HCV infection, KALYDECO, both as monotherapy and in combination with VX-809 and VX-661, VX-509, VX-765 and VX-787, and post-marketing commitment clinical trials of INCIVEK.

Sales, General and Administrative Expenses

	2011	2010 (in thousands)	2009	2011/2010 Comparison		2010/2009 Comparison	
				Increase	Increase	Increase	Increase
	(in thousands)			(in thousands, except percentages)			
Sales, general and administrative expenses	\$ 400,721	\$ 187,800	\$ 130,192	\$ 212,921	113%	\$ 57,608	44%

Sales, general and administrative expenses increased substantially in each of 2011 and 2010 as compared to the preceding year as a result of increases in workforce expenses as we prepared for and commercially launched INCIVEK in 2011. Advertising expenses incurred to support the launch of INCIVEK totaled \$30.8 million in 2011, for which there were no comparable expenses in 2010 or 2009. We expect that our sales, general and administrative expenses in 2012 will be consistent with our sales, general and administrative expenses for 2011.

Restructuring Expense

As of December 31, 2011, our lease restructuring liability was \$26.3 million. In 2011, 2010 and 2009, we recorded restructuring expense of \$2.1 million, \$1.5 million and \$6.2 million, respectively. In 2011, 2010 and 2009, we made cash payments of \$14.9 million, \$14.8 million and \$14.9 million, respectively, against the accrued expense and received \$9.5 million, \$8.8 million and \$8.6 million,

respectively, in sublease rental payments. During 2012, we expect to make additional cash payments of \$14.9 million against the accrued expense and to receive \$10.0 million in sublease rental payments.

Intangible Asset Impairment Charge

In 2011, we recorded a \$105.8 million impairment charge related to VX-759, a non-nucleoside HCV polymerase inhibitor that we acquired through our acquisition of ViroChem Pharma Inc., or ViroChem, in 2009. VX-759 was a back-up drug candidate for our non-nucleoside HCV polymerase inhibitor VX-222. Based on, among other factors, the advancement of VX-222 in 2011 and our consideration of potentially competitive drug candidates, we determined that the fair value of VX-759 had become impaired. In connection with this impairment charge, we recorded a credit of \$32.7 million in our provision for income taxes resulting in a net effect on our income related to this impairment charge of \$73.1 million in 2011. In 2009, we recorded a \$7.2 million impairment charge related to another drug candidate we acquired through our acquisition of ViroChem.

Acquisition-related Expenses

We incurred \$7.8 million of expenses in 2009 in connection with our acquisition of ViroChem, including \$5.7 million in transaction expenses and \$2.1 million related to a restructuring of ViroChem's operations. We did not incur corresponding acquisition-related expenses in 2011 or 2010.

Non-operating Items

Interest Income

Interest income decreased by \$0.1 million, or 4%, to \$1.9 million in 2011 from \$2.0 million in 2010. Interest income decreased by \$3.1 million, or 61%, to \$2.0 million in 2010 from \$5.0 million in 2009. Our cash, cash equivalents and marketable securities yielded less than 1% on an annual basis in 2011.

Interest Expense

Interest expense increased by \$19.2 million, or 99%, to \$38.5 million in 2011 from \$19.3 million in 2010. Interest expense increased by \$6.1 million, or 46%, to \$19.3 million in 2010 from \$13.2 million in 2009. These increases were primarily the result of the 3.35% convertible senior subordinated notes due 2015, or 2015 Notes, we issued in September 2010. In 2012, we expect to incur approximately \$13.4 million in interest expense related to the 2015 Notes.

Change in Fair Value of Derivative Instruments

In 2011, 2010 and 2009, we recorded losses of \$16.8 million, \$41.2 million and \$1.8 million, respectively, in connection with the embedded and free-standing derivatives associated with two financial transactions that we entered into in September 2009 related to \$250.0 million in contingent milestone payments that were earned by us from Janssen in 2011. The losses were principally due to adjustments we made in estimates regarding the timing and probability of achieving the milestones pursuant to our collaboration agreement with Janssen. In 2011, the contingent milestone payments that were the subject of the 2009 financial transactions were earned in full, and we will not incur any further charges related to the September 2009 financial transactions in future periods.

Loss on Exchanges of Convertible Senior Subordinated Notes

In 2009, we incurred non-cash charges of \$18.1 million in connection with the exchanges of \$255.4 million in aggregate principal amount of our 4.75% convertible senior subordinated notes due 2013, or 2013 Notes, for 11.6 million newly-issued shares of our common stock. The charges were based

on the value of the additional 542,937 shares of common stock that we issued in excess of the number of shares of common stock into which such 2013 Notes were convertible prior to the exchanges. There were no corresponding expenses in 2011 or 2010.

Provision for Income Taxes

In 2011, we recorded a provision for income taxes of \$19.3 million. This provision for income taxes was due to a provision of \$48.8 million for income taxes payable by Alios and a provision of \$3.7 million for state taxes, partially offset by a benefit from income taxes of \$32.7 million due to a tax benefit resulting from the impairment of VX-759. The provision of \$48.8 million for income taxes payable by Alios reduces net income attributable to noncontrolling interest (Alios) by a corresponding amount and as a result has no effect on the net income attributable to Vertex.

Noncontrolling Interest (Alios)

The net income attributable to noncontrolling interest (Alios) recorded on our consolidated statements of operations reflects Alios' net income for the reporting period, excluding revenues related to the up-front payment and milestone payments earned by Alios and adjusted for any changes during the reporting period in the fair value of the contingent milestone and royalty payments payable by us to Alios.

A summary of net income attributable to noncontrolling interest (Alios) in 2011 is as follows:

	2011
	(in thousands)
Loss before provision for income taxes	\$ (9,536)
Provision for income taxes	(48,809)
Change in fair value of contingent milestone and royalty payments	69,950
Net income attributable to noncontrolling interest (Alios)	<u>\$ 11,605</u>

The \$70.0 million change in fair value of contingent milestone and royalty payments in 2011 results in a corresponding reduction in net income attributable to Vertex for 2011. The provision for income taxes of \$48.8 million in 2011 attributable to noncontrolling interest (Alios) corresponds to a provision for income taxes payable by Alios on revenues from us included as part of the provision for income taxes on our consolidated statements of operations and has no net effect on net income attributable to Vertex.

If we are able to successfully advance one or more of the HCV nucleotide analogues we licensed from Alios into mid-stage and late-stage clinical development, we believe the fair value of the contingent milestone and royalty payments will continue to increase, which will reduce net income attributable to Vertex.

LIQUIDITY AND CAPITAL RESOURCES

We began operating as a cashflow positive company in the second half of 2011. As of December 31, 2011, we had cash, cash equivalents and marketable securities, excluding Alios' cash and cash equivalents, of \$968.9 million, which was an increase of \$375.4 million from \$593.5 million as of June 30, 2011. This increase was primarily due to cash receipts from INCIVEK sales partially offset by cash expenditures we made in the second half of 2011 related to, among other things, research and development expenses and sales, general and administrative expenses. In order to continue to operate as a cashflow positive company and to continue our strategic investment in research and development activities, we will need to continue to generate significant revenues in future periods.

Our cash, cash equivalents and marketable securities, excluding Alios' cash and cash equivalents, decreased by \$62.5 million during 2011, because of net cash expenditures in the first half of 2011 partially offset by net cash receipts in the second half of 2011. Our cash expenditures in 2011 were due to, among other things, research and development expenses, sales, general and administrative expenses, the \$60.0 million up-front payment we made to Alios and capital expenditures for property and equipment of \$34.6 million. In 2011, we received \$124.9 million in cash from issuances of common stock pursuant to employee benefit plans.

Sources of Liquidity

Prior to 2011, we financed our operations principally through public and private offerings of our equity and debt securities, strategic collaborative agreements that included research and/or development funding, development milestones and royalties on the sales of products, strategic sales of assets or businesses, financial transactions, investment income and proceeds from the issuance of common stock under our employee benefit plans. In future periods, we intend to rely on cash flows from product sales as our primary source of liquidity and cash flows from royalties as a secondary source of liquidity.

We may seek to borrow funds to finance our working capital needs if such financing is available to us. Our existing \$100.0 million credit facility, which terminates on July 6, 2012, is initially unsecured, but is subject to a number of affirmative and negative covenants, including a liquidity covenant that requires us to maintain cash, cash equivalents and marketable securities of more than \$400.0 million in domestic accounts. If we breach any of these covenants and it results in an event of default, upon the event of default the lender would obtain a security interest in cash, cash equivalents and marketable securities having a margined value of \$100.0 million, which would be transferred to an account controlled by the lender. To date, we have not utilized any funds available to us pursuant to this credit facility.

Future Capital Requirements

We are incurring substantial expenses to commercialize INCIVEK and KALYDECO, while at the same time continuing diversified research and development efforts for our drug candidates. In addition to funding our operating expenses, we have outstanding \$400.0 million in aggregate principal amount of 2015 Notes. The 2015 Notes bear interest at the rate of 3.35% per annum, and we are required to make semi-annual interest payments on the outstanding principal balance of the 2015 Notes on April 1 and October 1 of each year. The 2015 Notes will mature on October 1, 2015. The 2015 Notes are convertible, at the option of the holder, into our common stock at a price equal to approximately \$48.83 per share, subject to adjustment. In addition, we have substantial lease obligations that will continue through 2028.

In the second half of 2011, our cash flows from sales of INCIVEK exceeded our operating expenses, and we expect our cash flows from INCIVEK/INCIVO and KALYDECO 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 INCIVEK/INCIVO and KALYDECO, and the number, breadth, cost and prospects of our discovery and development programs.

Financing Strategy

Although we do not have any plans to do so in the near term, we may raise additional capital through public offerings or private placements of our securities, securing new collaborative agreements or other methods of financing. As part of our strategy for managing our capital structure, we have from time to time adjusted the amount and maturity of our debt obligations through new issues, privately negotiated transactions and market purchases, depending on market conditions and our perceived

needs at the time. We expect to continue pursuing a general financial strategy that may lead us to undertake one or more additional transactions with respect to our outstanding debt obligations, and the amounts involved in any such transactions, individually or in the aggregate, may be material. We will continue to manage our capital structure and to consider all financing opportunities, whenever they may occur, that could strengthen our long-term liquidity profile. Any capital transaction related to our outstanding debt obligations may or may not be similar to transactions in which we have engaged in the past. There can be no assurance that any such financing opportunities will be available on acceptable terms, if at all.

CONTRACTUAL COMMITMENTS AND OBLIGATIONS

The first part of the following table sets forth commitments and obligations that were recorded on our consolidated balance sheet at December 31, 2011. Certain other obligations and commitments, while not required to be included on the consolidated balance sheet, may have a material effect on our liquidity. We have presented these items, in the remaining rows of the table below in order to present a more complete picture of our financial position and liquidity.

	<u>2012</u>	<u>2013-2014</u>	<u>2015-2016</u>	<u>2017 and later</u>	<u>Total</u>
	(in thousands)				
Commitments and Obligations Recorded on the Consolidated Balance Sheet at December 31, 2011:					
Convertible senior subordinated notes (due October 2015) principal payment	\$ —	\$ —	\$ 400,000	\$ —	\$ 400,000
Convertible senior subordinated notes (due October 2015) interest payment	3,350	—	—	—	3,350
Construction financing obligation	—	55,950	—	—	55,950
Additional Commitments and Obligations at December 31, 2011:					
Convertible senior subordinated notes (due October 2015)—interest payments	10,050	26,800	13,400	—	50,250
Facility operating leases, excluding Fan Pier Leases	54,715	103,487	63,809	34,364	256,375
Fan Pier Leases	—	11,256	134,412	887,211	1,032,879
Research, development and drug supply costs	12,985	1,575	—	—	14,560
Alios milestones payable	25,000	—	—	—	25,000
Other	3,683	2,141	—	—	5,824
Total contractual commitments and obligations	<u>\$ 109,783</u>	<u>\$ 201,209</u>	<u>\$ 611,621</u>	<u>\$ 921,575</u>	<u>\$ 1,844,188</u>

Commitments and Obligations Recorded on the Consolidated Balance Sheet at December 31, 2011

In September 2010, we issued \$400.0 million in aggregate principal amount of 2015 Notes. The principal and interest accrued as of December 31, 2011 under these notes is included on our consolidated balance sheet as of December 31, 2011. The interest that is due for periods after December 31, 2011 is not required under GAAP to be reflected on our consolidated balance sheet and is set forth separately on the table above.

Our construction financing obligation relates to two buildings under construction on Fan Pier in Boston, Massachusetts, which are scheduled to be completed in late 2013. Although we will lease the space in these buildings, we are deemed for accounting purposes to be the owner of these buildings during the construction period and have recorded a long-term liability under the caption "Construction financing obligation" on our consolidated balance sheet.

Additional Commitments and Obligations Not Required to be Recorded on Consolidated Balance Sheet at December 31, 2011

Our future minimum commitments and contractual obligations include facility operating leases, our leases for the Fan Pier buildings, and contractual commitments related to our research, development

and drug supply, and interest that will accrue on the 2015 Notes after December 31, 2011. These items are not required to be recorded on our consolidated balance sheet.

Our future minimum commitments under our Kendall Square lease for the period commencing on January 1, 2012 are \$18.3 million for 2012, \$36.5 million for 2013 and 2014, \$36.5 million for 2015 and 2016, and \$24.3 million from 2017 through the expiration of the lease in 2018. These amounts are included in the table above as part of our facility operating leases. Rent payments for our Kendall Square lease will be subject to increase in May 2013, based on changes in an inflation factor. We are using approximately 40% of the Kendall Square facility for our operations. We have entered into two subleases for the remaining rentable square footage at the Kendall Square facility to offset our on-going contractual lease obligations. The future minimum committed income from the subleases is \$7.9 million for 2012, \$16.8 million for 2013 and 2014 and \$3.9 million for 2015. These amounts are not offset against our obligations set forth in the table above. See Note R, "Restructuring Expense," to our consolidated financial statements included in this Annual Report on Form 10-K.

"Fan Pier Leases" sets forth the future minimum rental payments that we are obligated to pay after taking occupancy of approximately 1.1 million square feet of office and laboratory space in two buildings under construction in Boston, Massachusetts less the amounts reflected on the consolidated balance sheet under the caption "Construction financing obligation." We expect to commence these rental payments upon completion of these buildings, scheduled for late 2013. The rental payments will extend for 15 years from the commencement date.

Commitments under research, development and drug supply investment represent contractual commitments entered into for materials and services in the normal course of business.

Pursuant to our collaboration with Alios, Alios is eligible to receive research and development milestone payments from us of up to \$715.0 million if ALS-2200 and ALS-2158 are approved and commercialized. As of December 31, 2011, Alios had earned \$35.0 million of these milestone payments, of which \$10.0 million had been paid as of December 31, 2011. Alios also is eligible to receive commercial milestone payments from us of up to \$750.0 million, as well as tiered royalties on net sales of approved drugs. In addition, we are obligated to make two one-time commercial milestone payments to CFFT upon achievement of certain sales levels for a potentiator compound such as KALYDECO. Contingent payments under these agreements become due and payable only upon achievement of certain milestones and are not included in the contractual obligations table above.

We exclude liabilities pertaining to uncertain tax positions from our summary of contractual obligations as we cannot make a reliable estimate of the period of cash settlement with the respective taxing authorities. As of December 31, 2011, we have approximately \$4.4 million of liabilities associated with uncertain tax positions. Approximately \$2.5 million are directly attributable to Alios and Vertex has no legal obligation associated with Alios' potential tax liabilities. As of December 31, 2011, we cannot reasonably estimate the amount we expect to pay within the next twelve months in connection with such settlements.

Our table detailing contractual commitments and obligations does not include severance payment obligations to certain of our executive officers in the event of a not-for-cause employment termination under existing employment contracts.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements prepared in accordance with generally accepted accounting principles in the United States, or GAAP. The preparation of these financial statements requires us to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and the reported amounts of revenues and expenses during the reported periods. We monitor and analyze changes in facts and circumstances that might have a material effect on our estimates and assumptions.

Changes in estimates are reflected in reported results for the period in which they become known. We base our estimates on historical experience and various other assumptions, including in certain circumstances future projections, that we believe to be reasonable under the circumstances. Actual results may differ from our estimates.

We believe that our application of the following accounting policies, each of which requires significant judgments and estimates on the part of management, are the most critical to aid in fully understanding and evaluating our reported financial results:

- revenue recognition;
- business transactions;
- research and development expenses;
- commercial supplies;
- derivative instruments and embedded derivatives;
- stock-based compensation expense; and
- income taxes.

Our accounting policies, including the ones discussed below, are more fully described in the Notes to our consolidated financial statements, including Note A "Nature of Business and Accounting Policies," included in this Annual Report on Form 10-K.

Revenue Recognition

Product Revenues, Net

In 2011, we began generating revenues in the United States from sales of INCIVEK. We sell INCIVEK principally to a limited number of major wholesalers, as well as selected regional wholesalers and specialty pharmacy providers, collectively our distributors, who subsequently resell INCIVEK to patients and health care providers. Separately, we have arrangements with numerous third-party payors that provide for government-mandated and privately-negotiated rebates, chargebacks and discounts.

We recognize net product revenues from sales of INCIVEK upon delivery to our distributors as long as:

- there is persuasive evidence that an arrangement exists between us and our distributor;
- collectability is reasonably assured; and
- the price is fixed or determinable.

We have written contracts with our distributors and delivery occurs when a distributor receives INCIVEK. We evaluate the creditworthiness of each of our distributors and have determined that all of our material distributors are creditworthy. In order to conclude that the price is fixed or determinable, we must be able to calculate our gross product revenues from our distributors and reasonably estimate our net product revenues. Our gross product revenues are based on the fixed wholesale acquisition cost for INCIVEK that we charge our distributors. We estimate our net product revenues by deducting from our gross product revenues (i) trade allowances, such as invoice discounts for prompt payment and distributor fees, (ii) estimated government and private payor rebates, chargebacks and discounts, such as Medicaid reimbursements, (iii) reserves for expected product returns and (iv) estimated costs of incentives offered to certain indirect customers including patients. These estimates, and in particular the estimates for rebates, chargebacks and discounts and expected product returns, require us to make significant judgments that materially affect our recognition of net product revenues on sales of INCIVEK.

The value of the rebates, chargebacks and discounts provided to third-party payors per course of treatment vary significantly and are based on government-mandated discounts and our arrangements with other third-party payors. Typically, government-mandated discounts are significantly larger than discounts provided to other third-party payors. In order to estimate our total rebates, chargebacks and discounts, we estimate the percentage of prescriptions that will be covered by each third-party payor, which is referred to as the payor mix. We track available information regarding changes, if any, to the payor mix for INCIVEK, to our contractual terms with third-party payors and to applicable governmental programs and regulations and levels of INCIVEK in the distribution channel. If necessary, we will adjust our estimated rebates, chargebacks and discounts based on new information, including information regarding actual rebates, chargebacks and discounts for INCIVEK, as it becomes available. If we increased our estimate of the percentage of patients receiving INCIVEK covered by third-party payors entitled to government-mandated discounts by two percentage points, our net product revenues would decrease by less than 1% for the three months ended December 31, 2011.

Our distributors have the right to return unopened INCIVEK that has not been prescribed beginning six months prior to the labeled expiration date and ending twelve months after the labeled expiration date. The expiration date for INCIVEK is two years after it has been converted into tablet form, which is the last step in the manufacturing process for INCIVEK and generally occurs within a few months before INCIVEK is delivered to distributors. As of December 31, 2011, we have not received any material product returns. Based on our specialty distribution model with sales to a limited number of distributors, data provided to us by our distributors, including weekly reporting of distributor sales and inventory levels, and by other third parties, historical industry information regarding return rates for similar specialty pharmaceutical products, the estimated remaining shelf life of INCIVEK previously shipped and currently being shipped, and contractual agreements with our distributors, which include provisions designed to limit the amount of inventory they maintain, we have estimated that product returns for INCIVEK sold to distributors in 2011 will be less than 1% of net sales. We track actual returns by individual production lots and will continue to monitor inventory levels in the distribution channel. If necessary, we will adjust our estimated product returns based on new information as it becomes available.

Up-front License Fees

We recognize revenues from nonrefundable, up-front license fees related to collaboration agreements, including the \$165.0 million we received from Janssen in 2006 and the \$105.0 million we received from Mitsubishi Tanabe in 2009, on a straight-line basis over the contracted or estimated period of performance. The period of performance over which the revenues are recognized is typically the period over which the research and/or development is expected to occur or manufacturing services are expected to be provided. When the period of performance is based on the period over which research and/or development is expected to occur, we are required to make estimates regarding drug development and commercialization timelines. Because of the many risks and uncertainties associated with the development of drug candidates, these estimates regarding the period of performance have changed in the past and may change in the future. Our estimates regarding the period of performance under the Janssen collaboration agreement were adjusted in 2007, 2009 and 2010, as a result of changes in the global development plan for telaprevir. These adjustments were made on a prospective basis beginning in the periods in which the changes were identified and resulted in decreases in the amount of revenues we recognized on a quarterly basis from the Janssen collaboration.

Milestone Payments

At the inception of each agreement that includes contingent milestone payments payable to us, we evaluate whether the contingencies underlying each milestone event are substantive, specifically reviewing factors such as the scientific and other risks that must be overcome to achieve the milestone event, as well as the level of successful effort and investment required. If we do not consider a

milestone event to be substantive, the revenues from the related milestone payment will be recognized over the period of performance. Where a substantive milestone event is achieved in a collaboration arrangement and the corresponding payment is reasonably assured, we recognize the payment as earned. Because achievement of a substantive milestone event under a collaboration agreement typically requires the completion of a number of activities conducted over a significant period of time, the expenses related to achieving the milestone event often are incurred prior to the period in which the milestone payment is recognized. The milestone events that we achieved under our Janssen collaboration agreement in 2011 that resulted in \$250.0 million in revenues were considered substantive and the revenues related to each milestone event were recognized in the quarter in which the corresponding payment became reasonably assured.

Royalty Revenues

Royalty revenues for INCIVO are recognized based on net sales of INCIVO as reported to us by Janssen and are recognized in the period the sales occur. Because net sales as reported by Janssen could include certain estimates, we could experience future adjustments to royalty revenues and the adjustments could be significant.

Business Transactions

Business Combinations

In March 2009, we acquired ViroChem for \$100.0 million in cash and common stock with a fair market value of \$290.6 million. We assigned the value of the consideration transferred to acquire the business to the tangible assets and identifiable intangible assets acquired and liabilities assumed, on the basis of their fair values at the date of acquisition. The difference between the purchase price and the fair value of assets acquired and liabilities assumed was allocated to goodwill. This goodwill related to the potential synergies from the possible development of combination therapies involving telaprevir and the acquired drug candidates.

The allocations recorded on our consolidated balance sheet as of the acquisition date included \$525.9 million of intangible assets related to in-process research and development and a \$162.5 million deferred tax liability. The intangible assets acquired were in-process research and development assets relating to two drug candidates being developed by ViroChem, VX-222 and VX-759. VX-222 and VX-759 had estimated fair values on the acquisition date of \$412.9 million and \$105.8 million, respectively.

We have tested the fair value of VX-222 on an annual basis since the acquisition date and no impairment has been identified. In connection with preparing our quarterly report for the period ended September 30, 2011, we identified certain factors that were considered impairment indicators related to VX-759. We determined that the fair value of VX-759 was zero dollars, based on the advancement of VX-222 in the third quarter of 2011, our consideration of potentially competitive drug candidates and the other factors described in Note C, "Acquisition of Viro Chem Pharma, Inc.," in the accompanying notes to the consolidated financial statements. This determination resulted in a \$105.8 million impairment charge in the third quarter of 2011. In connection with this impairment charge, we also recorded an adjustment of \$32.7 million to our deferred tax liability. As of December 31, 2011, our consolidated balance sheet included the following related to the ViroChem acquisition: \$412.9 million of intangible assets related to VX-222 and a \$127.6 million deferred tax liability.

We assess the fair value of assets, including intangible assets such as in-process research and development, using a variety of methods, including present-value models that are based upon multiple probability-weighted scenarios involving the development and potential commercialization of the acquired drug candidates. The present-value models require us to make significant assumptions regarding the estimates that market participants would make in evaluating a drug candidate, including

the probability of successfully completing clinical trials and obtaining regulatory approval to market the drug candidate, the timing of and the expected costs to complete in-process research and development projects, future cash flows from potential drug sales, which are based on estimates of the sales price of the drug, the number of patients that will be diagnosed and treated and our competitive position in the marketplace, and appropriate discount rates. The estimated fair value ascribed to VX-222 and VX-759 on the acquisition date was based on the estimated fair value that would be ascribed to each of these drug candidates by a market participant that acquired both drug candidates in a single transaction. The assumed probability of advancing VX-222 and VX-759 through various phases of development reflected the understanding among market participants that most drug candidates that enter Phase 2 clinical trials are not ultimately approved for commercial sale. While, on the date of acquisition, VX-222 and VX-759 were each at a similar stage of development, we attributed a significantly higher value to VX-222 than to VX-759 because the clinical and nonclinical data from the VX-222 program was significantly more promising than the clinical and nonclinical data from the VX-759 program. In addition, the fair value estimate incorporated our determination that a market participant would not be likely to continue development of VX-759 unless future data from clinical trials or nonclinical studies of VX-222 resulted in a delay or discontinuation of the VX-222 development program. Projections of the duration and cost of nonclinical studies and clinical trials vary significantly over the life of a project depending on developments in the program over time, but in order to estimate the fair market value on the acquisition date we made the following assumptions from the perspective of market participants regarding the potential timing and costs to develop VX-222 and/or VX-759. We assumed if a drug candidate were successfully developed in the United States it would take approximately five to nine years from the date of the acquisition in order to obtain marketing approval. In addition, for the valuation, we assumed an estimate of cost from acquisition to launch to develop a drug candidate that was within a range of \$400 million to \$700 million. Future cash flows, if any, would not be generated until a drug candidate completed all required phases of clinical trials and obtained regulatory approval. The risk-adjusted discount rate for each of these projects was approximately 28%.

ViroChem's in-process research and development assets were recorded at fair value and accounted for as indefinite-lived intangible assets. We maintain these assets on our consolidated balance sheet until either the research and development project underlying it is completed or the asset becomes impaired. If we complete a project, we will amortize the carrying value of the related intangible asset as part of cost of product revenues over the remaining estimated life of the asset. If we determine that an asset has become impaired or we abandon a project, we write down the carrying value of the related intangible asset to its fair value and take an impairment charge in the period in which the impairment occurs. In order to complete an acquired research and development project, the related drug candidate must be evaluated in later-stage clinical trials, which are subject to all of the risks and uncertainties associated with the development of pharmaceutical products. In 2012, we expect to obtain data from an ongoing clinical trial evaluating telaprevir/VX-222-based combination therapy. In addition, while the development and regulatory timelines for VX-222 and drug candidates being developed by our competitors are highly subjective and subject to change, we believe that substantial additional clinical data regarding these drug candidates and potential all-oral treatment regimens will become available in 2012 and 2013 and that one or more all-oral treatment regimens could enter the market as early as 2014 or 2015. If the fair value of VX-222 becomes impaired as the result of unfavorable safety or efficacy data from any ongoing or future clinical trial or because of any other information regarding the prospects of successfully developing or commercializing VX-222, we could incur significant charges in the period in which the impairment occurs.

We test the ViroChem intangible assets for impairment on an annual basis as of October 1, and more frequently if indicators are present or changes in circumstance suggest that impairment may exist. Events that could indicate impairment and trigger an interim impairment assessment include the receipt of additional clinical or nonclinical data regarding our drug candidate or a potentially competitive drug candidate, changes in the clinical development program for a drug candidate or new information

regarding potential sales prices for the drug. In connection with each annual impairment assessment and any interim impairment assessment, we compare the fair value of the asset as of the date of the assessment with the carrying value of the asset on our consolidated balance sheet. The fair value of the ViroChem intangible assets were estimated using the probability-weighted present-value models described above, utilizing updated assumptions and estimates regarding the status of the development programs for the drug candidates, the potential future cash flows from sales of drugs, and appropriate discount rates.

Variable Interest Entity and Collaborative Arrangements—Alios BioPharma, Inc.

In June 2011, we entered into an agreement with Alios pursuant to which we agreed to collaborate on the research, development and commercialization of ALS-2200 and ALS-2158, two HCV nucleotide analogues discovered by Alios. We are responsible for all expenses related to the development and commercialization of the compounds and provide research funding to Alios. We paid Alios a \$60.0 million up-front payment, and Alios is eligible to receive research and development milestone payments, commercial milestone payments and tiered royalties on net sales of any approved drugs licensed by us under the collaboration agreement. Our interests in Alios are limited to those accorded to us pursuant to our collaboration agreement with Alios, and we have no equity interest, or right to acquire any equity interest, in Alios. In addition to Alios' activities related to HCV nucleotide analogues, Alios is engaged in separate programs directed at developing novel drugs.

Our collaboration with Alios requires us to apply accounting policies that involve significant judgments and that have a material effect on our consolidated financial statements. Under applicable accounting guidance, as a result of the relationship established through the collaboration agreement, Alios is deemed to be a variable interest entity, or VIE. Because we acquired an exclusive license to certain intellectual property belonging to the VIE, and based on the significance of the two licensed compounds to Alios taken as a whole, the collaboration is treated for accounting purposes as if we have acquired an interest in the entire VIE. In the Alios collaboration, where (a) through the joint steering committee, we have the power to direct the development and commercialization of the two licensed compounds, which are the activities that most significantly affect the economic performance of Alios, (b) we are required to fund research and development activities related to the licensed assets and (c) we are entitled to receive a majority of the potential revenues from sales of drugs developed pursuant to the collaboration, we are deemed under accounting guidance to be the primary beneficiary of a VIE that is a business. As a result, we are required to consolidate Alios' financial statements into our financial statements.

We believe that the following effects of the consolidation on our consolidated financial statements are the most significant:

- In each period, we record net income (loss) attributable to the Alios noncontrolling interest. This net income (loss) reflects Alios' net income (loss) for the period as adjusted for gains and losses in the fair value of the contingent milestone and royalty payments payable by us to Alios. Determining the fair value of the contingent milestone and royalty payments payable by us to Alios requires us to make significant estimates regarding the probability and potential timing of achieving each of the milestones pursuant to the agreement; future potential net sales of HCV nucleotide analogues licensed from Alios and appropriate discount rates. We expect that the net income (loss) attributed to noncontrolling interest (Alios) will continue to be affected by changes in the fair value of the contingent milestone and royalty payments. For example, in 2011 we advanced both of Alios' HCV nucleotide analogues into clinical development and the fair value of the contingent milestone and royalty payments increased by \$70.0 million due to increases in the likelihood of achieving milestones and obtaining regulatory approvals, together with decreases in the time period over which we are discounting potential milestone and royalty

payments. Increases in the fair value of the contingent milestone and royalty payments in 2011 resulted in a significant decrease in net income attributable to Vertex in 2011.

- We recorded \$250.6 million of intangible assets on our consolidated balance sheet based on our estimate of the fair value of Alios' in-process research and development assets as of the transaction date and made significant estimates regarding: the probability of obtaining regulatory approval of an HCV nucleotide analogue; the timing and expected costs of clinical trials and other development activities; future potential cash flows from sales of drugs and the appropriate discount rates. If we are successful in developing one or more HCV nucleotide analogues, we will amortize the carrying value of the intangible asset as part of cost of product revenues. We test these in-process research and development assets for impairment on an annual basis as of October 1, and more frequently if indicators are present or changes in circumstances suggest that impairment may exist. If the fair value of Alios HCV nucleotide analogue program becomes impaired as the result of safety or efficacy data from any ongoing or future clinical trial conducted by us or our competitors or because of any other information regarding the prospects of successfully developing or commercializing the HCV nucleotide analogues we license from Alios, we could incur significant charges in the period in which the impairment occurs. We determined the fair value of these in-process research and development assets using probability-weighted present-value models.
- Since the effective date of the collaboration we have consolidated all of Alios' expenses and revenues into our consolidated statements of operations, eliminating all intercompany balances and transactions. In 2011, Alios' operating expenses were immaterial to our consolidated statements of operations. In future periods, if Alios increases its headcount and/or expands its activities related to its other programs, its operating expenses could increase substantially. To the extent that Alios pursues other programs, we expect that expenses of Alios related to those activities would be reflected in our research and development expenses and our sales, general and administrative expenses as a result of the financial statement consolidation. We would not be entitled to any benefits from those activities.
- We reflect all of Alios' cash and cash equivalents as restricted cash and cash equivalents (Alios) when we consolidate Alios' balance sheet. We do not have any rights to Alios' cash or cash equivalents; these resources are not available to fund research and development programs pursuant to the collaboration and these amounts do not provide us with any additional liquidity. As a result of payments we made to Alios in 2011, Alios had significant liquid assets as of December 31, 2011. Alios has control over the restricted cash and cash equivalents (Alios), including the ability to distribute the restricted cash and cash equivalents to Alios' equityholders, and as a result this asset, although carried on our consolidated balance sheet, is not included in the discussion of our liquidity and should be disregarded when evaluating our financial condition.

Research and Development Expenses

All research and development expenses, including amounts funded through research and development collaborations, are expensed as incurred. Research and development expenses are comprised of costs incurred in performing research and development activities, including salary and benefits; stock-based compensation expense; laboratory supplies and other direct expenses; contractual services, including clinical trial and pharmaceutical development costs; expenses associated with drug supplies that are not being capitalized; and infrastructure costs, including facilities costs and depreciation.

When third-party service providers' billing terms do not coincide with our period-end, we are required to make estimates of our obligations to those third parties, including clinical trial and pharmaceutical development costs, contractual services costs and costs for drug supply, incurred in a

given accounting period and record accruals at the end of the period. We base our estimates on our knowledge of the research and development programs, services performed for the period, past history for related activities and the expected duration of the third-party service contract, where applicable.

Commercial Supplies

We capitalize inventories produced in preparation for potentially initiating sales of a drug candidate when the drug candidate is considered to have a high probability of regulatory approval and the costs to manufacture the drug candidate are expected to be recoverable through sales of the drug. In determining whether or not to capitalize such inventories, we evaluate, among other factors, information regarding the drug candidate's safety and efficacy, the status of regulatory submissions and communications with regulatory authorities and the outlook for commercial sales, including the existence of current or anticipated competitive drugs and the availability of reimbursement. In addition, we evaluate risks associated with manufacturing the drug candidate and the remaining shelf life of the inventories. After we begin capitalizing inventories, we continue to monitor these factors and, if there are significant negative developments regarding the drug candidate, we could be required to impair previously capitalized costs.

We began capitalizing the costs of our INCIVEK inventories on January 1, 2011. Because we expensed most of the manufacturing costs related to initial quantities of INCIVEK as research and development expenses in prior periods, our initial cost of product revenues for INCIVEK was low and will increase in future periods.

Derivative Instruments and Embedded Derivatives—September 2009 Financial Transactions

Expenses related to two financial transactions that we entered into in September 2009 resulted in \$16.8 million, \$41.2 million and \$1.8 million, respectively, in expenses in 2011, 2010 and 2009. The two financial transactions related to \$250.0 million of milestone payments that were earned by us from Janssen in 2011 in connection with the regulatory filing, approval and launch of INCIVO in the European Union. In the first financial transaction, we issued secured notes due 2012, or 2012 Notes, which had a face value of \$155.0 million and did not carry an explicit interest rate, for \$122.2 million in cash. The 2012 Notes were payable in October 2012, subject to earlier redemption and were secured by \$155.0 million of contingent milestone payments. The 2012 Notes were redeemed in full in 2011 upon the receipt of the corresponding Janssen milestone payments. In the second transaction, we sold \$95.0 million in contingent milestone payments for a cash payment of \$32.8 million.

The 2012 Notes contained an embedded derivative related to their potential early repayment or redemption. The separate sale of the \$95.0 million in contingent milestone payments was accounted for as a free-standing derivative instrument. In order to account for the 2012 Notes and the sale of the rights to the \$95.0 million in milestone payments, we estimated the fair value of the derivative embedded in the 2012 Notes and of the free-standing derivative. The models we used to estimate these fair values required, among other things, estimates regarding the timing and probability of achieving the milestone events and the appropriate discount rates. As these milestones were achieved and we and Janssen obtained additional data from the telaprevir registration program, we updated these assumptions to reflect the increasing probability of achieving these milestone events and the expected timing of such events and recorded corresponding expenses or gains in each quarterly period. While the total amount of the expenses related to these two financial transactions was fixed at \$95.0 million, plus the initial transaction expenses, provided that the milestones were achieved prior to October 2012, the timing of these expenses in 2011, 2010 and 2009 was dependent on the estimates and assumptions incorporated in the models used to estimate the fair values of the embedded and free-standing derivatives at the end of each fiscal quarter.

Stock-based Compensation Expense

We measure the compensation cost of stock-based compensation at the grant date, based on the fair value of the award, including estimated forfeitures, and we recognize that cost as an expense ratably over the associated employee service period, which generally is the vesting period of the equity award, or the derived service period for awards with market conditions. For our awards with performance conditions, we make estimates regarding the likelihood of satisfaction of the performance condition that affect the period over which the expense is recognized. We calculate the fair value of stock options and shares purchased pursuant to our employee stock purchase plan using the Black-Scholes option pricing model. The Black-Scholes option pricing model requires us to make certain assumptions and estimates concerning our stock price volatility, the rate of return of risk-free investments, the expected term of the awards, and our anticipated dividends. In determining the amount of expense to be recorded, we also are required to exercise judgment to estimate forfeiture rates for awards, based on the probability that employees will complete the required service period. If actual forfeitures differ significantly from our estimates, if any of our estimates or assumptions prove incorrect, or if the likelihood of achievement of a performance condition changes, our results could be materially affected.

Income Taxes

Despite beginning to operate as a profitable and cashflow positive company in the second half of 2011, we continue to maintain a valuation allowance on our net operating losses and other deferred tax assets because we have an extended history of annual losses. Our U.S. federal net operating loss carryforwards totaled approximately \$2.7 billion as of December 31, 2011.

On a quarterly basis, we reassess the valuation allowance for deferred income tax assets. We would consider reversing a significant portion of the valuation reserve upon assessment of certain factors, including: (i) a demonstration of sustained profitability; and (ii) the support of internal financial forecasts demonstrating the utilization of the net operating loss carryforwards prior to their expiration. If we determine that the reversal of all or a portion of the valuation reserves is appropriate, a significant benefit could be recognized against our income tax provision in the period of the reversal.

Recent Accounting Pronouncements

Refer to Note A, "Nature of Business and Accounting Policies," in the accompanying notes to the consolidated financial statements for a discussion of recent accounting pronouncements.

ITEM 7A. 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. We do not have derivative financial instruments in our investment portfolio.

Interest Rate Risk

We invest our cash in a variety of financial instruments, principally securities issued by the United States government and its agencies, investment grade corporate bonds and commercial paper, and money market funds. These investments are denominated in United States 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 and Canadian Dollar against the U.S. dollar. The current exposures arise primarily from cash, accounts receivable, intercompany receivables and payables, and calculations of royalties receivable from net sales denominated in foreign currencies. Both positive and negative impacts to our international product sales from movements in foreign currency exchange rates are partially mitigated by the natural, opposite impact that foreign currency exchange rates have on our international operating expenses.

We are considering a foreign currency management program with the objective of reducing the volatility of exchange rate fluctuations on our operating results and to increase the visibility of the foreign exchange impact on forecasted revenues.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item 8 is contained on pages F-1 through F-54 of this Annual Report on Form 10-K.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

(1) Evaluation of Disclosure Controls and Procedures. The Company's chief executive officer and chief financial officer, after evaluating the effectiveness of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this Annual Report on Form 10-K, have concluded that, based on such evaluation, the Company's disclosure controls and procedures were effective. In designing and evaluating the disclosure controls and procedures, the Company's 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 the Company's management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

(2) Management's Annual Report on Internal Control Over Financial Reporting. The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) and Rule 15d-15(f) promulgated under the Securities Exchange Act of 1934, as amended, as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and effected by the Company's Board of Directors, management and other personnel, 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. The Company's internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and

- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2011. In making this assessment, it used the criteria set forth in the Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on its assessment, the Company's management has concluded that, as of December 31, 2011, the Company's internal control over financial reporting is effective based on those criteria.

The Company's independent registered public accounting firm, Ernst & Young LLP, issued an attestation report on the Company's internal control over financial reporting. See Section 4 below.

(3) Changes in Internal Controls. During the quarter ended December 31, 2011, there were no changes in our internal control over financial reporting that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

(4) Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of
Vertex Pharmaceuticals Incorporated

We have audited Vertex Pharmaceuticals Incorporated's internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Vertex Pharmaceuticals Incorporated's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Vertex Pharmaceuticals Incorporated maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Vertex Pharmaceuticals Incorporated as of December 31, 2011 and 2010, and the related consolidated statements of operations, shareholders' equity, comprehensive income (loss) and noncontrolling interest, and cash flows for each of the three years in the period ended December 31, 2011 of Vertex Pharmaceuticals Incorporated and our report dated February 22, 2012 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Boston, Massachusetts
February 22, 2012

ITEM 9B. OTHER INFORMATION

Not applicable.

PART III

Portions of our definitive Proxy Statement for the 2012 Annual Meeting of Shareholders, or 2012 Proxy Statement, during which, we expect to, among other things, (i) elect our Class II Directors, (ii) conduct the non-binding advisory vote on our executive compensation program and (iii) ratify the appointment of our independent registered accounting firm, are incorporated by reference into this Part III of our Annual Report on Form 10-K. After taking into consideration the results of the "say-on-pay-frequency vote" at the 2011 Annual Meeting of Shareholders held in May 2011, our Board of Directors adopted the recommendation of our shareholders to conduct the vote on our executive compensation program on an annual basis until the next "say-on-pay-frequency vote" by shareholders.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information regarding directors required by this Item 10 will be included in our 2012 Proxy Statement under "Proposal 1—Election of Directors," "Information Regarding Our Board," "Shareholder Proposals for the 2012 Annual Meeting and Nominations for Director" and is incorporated herein by reference. Other information required by this Item 10 will be included in the 2012 Proxy Statement under "Section 16(a) Beneficial Ownership Reporting Compliance" and "Code of Conduct and Ethics" and is incorporated herein by reference. The information regarding executive officers required by this Item 10 as well as certain information regarding our directors is included in Part I of this Annual Report on Form 10-K.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item 11 will be included in the 2012 Proxy Statement under "Compensation Committee Interlocks and Insider Participation," "Executive Compensation" and/or "Information Regarding Our Board" and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item 12 will be included in the 2012 Proxy Statement under "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item 13 will be included in the 2012 Proxy Statement under "Proposal 1—Election of Directors" and "Approval of Related Person Transactions and Transactions with Related Persons" and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item 14 will be included in the 2012 Proxy Statement under "Independent Registered Public Accounting Firm" and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) The Financial Statements required to be filed by Items 8 and 15(c) of Form 10-K, and filed herewith, are as follows:

	<u>Page Number in this Form 10-K</u>
Report of Independent Registered Public Accounting Firm	F-1
Consolidated Statements of Operations for the years ended December 31, 2011, 2010 and 2009	F-2
Consolidated Balance Sheets as of December 31, 2011 and 2010	F-3
Consolidated Statements of Shareholders' Equity, Comprehensive Income (Loss) and Noncontrolling Interest for the years ended December 31, 2011, 2010 and 2009	F-4
Consolidated Statements of Cash Flows for the years ended December 31, 2011, 2010 and 2009	F-5
Notes to Consolidated Financial Statements	F-6

(a)(2) Financial Statement Schedules have been omitted because they are either not applicable or the required information is included in the consolidated financial statements or notes thereto listed in (a)(1) above.

(a)(3) Exhibits.

The following is a list of exhibits filed as part of this Annual Report on Form 10-K.

<u>Exhibit Number</u>	<u>Exhibit Description</u>	<u>Filed with this report</u>	<u>Incorporated by Reference herein from—Form or Schedule</u>	<u>Filing Date/ Period Covered</u>	<u>SEC File/ Reg. Number</u>
3.1	Restated Articles of Organization of Vertex Pharmaceuticals Incorporated, as amended.		10-Q (Exhibit 3.1)	August 11, 2008	000-19319
3.2	By-laws of Vertex Pharmaceuticals Incorporated, as amended and restated as of May 11, 2005.		10-Q (Exhibit 3.1)	August 9, 2005	000-19319
4.1	Specimen stock certificate.		S-1 (Exhibit 4.1)	July 18, 1991	33-40966
4.2	Subordinated Indenture, dated as of September 28, 2010, by and between Vertex Pharmaceuticals Incorporated and U.S. Bank National Association, as trustee.		8-K (Exhibit 4.1)	September 29, 2010	000-19319
4.3	First Supplemental Indenture, dated as of September 28, 2010, by and between Vertex Pharmaceuticals Incorporated and U.S. Bank National Association, as trustee.		8-K (Exhibit 4.2)	September 29, 2010	000-19319
4.4	Form of 3.35% Convertible Senior Subordinated Note due 2015.		8-K (Exhibit 4.3)	September 29, 2010	000-19319
Collaboration Agreements					
10.1	License, Development, Manufacturing and Commercialization Agreement, dated June 30, 2006, by and between Vertex Pharmaceuticals Incorporated and Janssen Pharmaceutica, N.V.†	X			
10.2	License, Development and Commercialization Agreement, dated as of June 11, 2004, between Vertex Pharmaceuticals Incorporated and Mitsubishi Pharma Corporation.†		10-Q (Exhibit 10.1)	November 9, 2009	000-19319

<u>Exhibit Number</u>	<u>Exhibit Description</u>	<u>Filed with this report</u>	<u>Incorporated by Reference herein from—Form or Schedule</u>	<u>Filing Date/ Period Covered</u>	<u>SEC File/ Reg. Number</u>
10.3	Second Amendment to License, Development and Commercialization Agreement, dated July 30, 2009, between Mitsubishi Tanabe Pharma Corporation and Vertex Pharmaceuticals Incorporated.†		10-Q (Exhibit 10.2)	November 9, 2009	000-19319
10.4	Research Agreement and License Agreement, both dated December 16, 1993, between Vertex and Burroughs Wellcome Co.†		10-K (Exhibit 10.16)	Year Ended December 31, 1993	000-19319
10.5	Research, Development and Commercialization Agreement, dated as of May 24, 2004, between Vertex Pharmaceuticals Incorporated and Cystic Fibrosis Foundation Therapeutics Incorporated.†		10-Q/A (Exhibit 10.2)	August 19, 2011	000-19319
10.6	Amendment No. 1 to Research, Development and Commercialization Agreement, dated as of January 6, 2006, between Vertex Pharmaceuticals Incorporated and Cystic Fibrosis Foundation Therapeutics Incorporated.†		10-K (Exhibit 10.9)	March 16, 2006	000-19319
10.7	Amendment No. 2 to Research, Development and Commercialization Agreement, dated as of March 17, 2006, between Vertex Pharmaceuticals Incorporated and Cystic Fibrosis Foundation Therapeutics Incorporated.		10-Q/A (Exhibit 10.6)	August 19, 2011	000-19319
10.8	Amendment No. 5 to Research, Development and Commercialization Agreement, effective as of April 1, 2011, between Vertex Pharmaceuticals Incorporated and Cystic Fibrosis Foundation Therapeutics Incorporated.†		10-Q (Exhibit 10.3)	August 9, 2011	000-19319
10.9	Research and Development Agreement between the Company and Eli Lilly and Company effective June 11, 1997*†		10-Q (Exhibit 10.1)	August 14, 1997	000-19319
10.10	License and Collaboration Agreement, dated June 13, 2011, by and between Alios BioPharma, Inc. and Vertex Pharmaceuticals Incorporated and Vertex Pharmaceuticals (Switzerland) LLC.†		10-Q (Exhibit 10.1)	August 9, 2011	000-19319
Financial Transactions					
10.11	Credit Agreement, dated January 7, 2011 among Vertex Pharmaceuticals Incorporated, the Lenders and Bank of America, N.A.		10-Q (Exhibit 10.1)	May 6, 2011	000-19319
10.12	Purchase Agreement, dated May 30, 2008, by and between Vertex Pharmaceuticals Incorporated and Fosamprenavir Royalty, L.P.		10-Q (Exhibit 10.2)	August 11, 2008	000-19319
Leases					
10.13	Lease, dated May 5, 2011, between Fifty Northern Avenue LLC and Vertex Pharmaceuticals Incorporated.†		10-Q (Exhibit 10.4)	August 9, 2011	000-19319
10.14	Lease, dated May 5, 2011, between Eleven Fan Pier Boulevard LLC and Vertex Pharmaceuticals Incorporated.†		10-Q (Exhibit 10.5)	August 9, 2011	000-19319
10.15	Lease, dated as of March 3, 1995, between Fort Washington Realty Trust and Vertex.		10-K (Exhibit 10.15)	Year Ended December 31, 1994	000-19319

<u>Exhibit Number</u>	<u>Exhibit Description</u>	<u>Filed with this report</u>	<u>Incorporated by Reference herein from—Form or Schedule</u>	<u>Filing Date/ Period Covered</u>	<u>SEC File/ Reg. Number</u>
10.16	First Amendment to Lease, dated as of December 29, 1995, between Fort Washington Realty Trust and Vertex Pharmaceuticals Incorporated.		10-K (Exhibit 10.15)	Year Ended December 31, 1995	000-19319
10.17	Second Amendment to Lease, dated as of June 13, 1997, between Fort Washington Realty Trust and Vertex Pharmaceuticals Incorporated.		10-K (Exhibit 10.20)	March 26, 1998	000-19319
10.18	Third, Fourth and Fifth Amendments to Lease between Fort Washington Realty Trust and Vertex Pharmaceuticals Incorporated.†		10-K (Exhibit 10.14)	March 26, 2001	000-19319
10.19	Lease, dated as of September 17, 1999, between Trustees of Fort Washington Realty Trust and Vertex Pharmaceuticals Incorporated.†		10-Q (Exhibit 10.27)	November 15, 1999	000-19319
10.21	Amendment to Lease, dated January 12, 2009, by and between BMR-200 Sidney Street LLC and Vertex Pharmaceuticals Incorporated.		10-Q (Exhibit 10.4)	May 11, 2009	000-19319
10.20	Lease, dated as of January 18, 2001, between Kendall Square, LLC and Vertex Pharmaceuticals Incorporated.†		10-K (Exhibit 10.16)	March 26, 2001	000-19319
10.22	Agreement for Lease, dated as of November 4, 1998, between Milton Park Limited, Vertex Pharmaceuticals Incorporated and Vertex Pharmaceuticals (Europe) Limited.		10-K (Exhibit 10.21)	March 30, 1999	000-19319
10.23	Lease between MEPC Milton Park No.1 Limited and MEPC Milton Park No. 2 Limited, Vertex Pharmaceuticals (Europe) Limited and Vertex Pharmaceuticals Incorporated, dated June 10, 2009.		10-Q (Exhibit 10.1)	August 10, 2009	000-19319
Equity Plans					
10.24	1996 Stock and Option Plan, as amended and restated as of March 14, 2005.*		10-K (Exhibit 10.3)	March 16, 2005	000-19319
10.25	Form of Stock Option Grant under 1996 Stock and Option Plan.*		8-K (Exhibit 10.1)	February 9, 2005	000-19319
10.26	Form of Restricted Stock Award under 1996 Stock and Option Plan—Annual Vesting.*		8-K (Exhibit 10.2)	February 9, 2005	000-19319
10.27	Form of Restricted Stock Agreement (Performance Accelerated Restricted Stock) under 1996 Stock and Option Plan.*		8-K (Exhibit 10.3)	February 9, 2005	000-19319
10.28	Amended and Restated 2006 Stock and Option Plan.*		10-Q (Exhibit 10.1)	August 3, 2010	000-19319
10.29	Form of Stock Option Grant under 2006 Stock and Option Plan.*		8-K (Exhibit 10.2)	May 15, 2006	000-19319
10.30	Form of Restricted Stock Award under Stock and Option Plan.*		8-K (Exhibit 10.3)	May 15, 2006	000-19319
10.31	Form of Restricted Stock Award (Performance Accelerated Restricted Stock) under 2006 Stock and Option Plan.*		8-K (Exhibit 10.4)	May 15, 2006	000-19319
10.32	Form of Stock Option Grant-Performance Accelerated 2009 Stock-Options.*		10-K (Exhibit 10.33)	February 19, 2010	000-19319
10.33	Vertex Pharmaceuticals Incorporated Employee Stock Purchase Plan, as amended and restated.*		10-Q (Exhibit 10.8)	August 11, 2008	000-19319

<u>Exhibit Number</u>	<u>Exhibit Description</u>	<u>Filed with this report</u>	<u>Incorporated by Reference herein from—Form or Schedule</u>	<u>Filing Date/ Period Covered</u>	<u>SEC File/ Reg. Number</u>
Agreements with Executive Officers and Directors					
10.34	Agreement between Jeffrey M. Leiden and Vertex, dated December 14, 2011.*	X			
10.35	Employee Non-disclosure, Non-competition and Inventions Agreement between Jeffrey M. Leiden and Vertex, dated December 14, 2011.*	X			
10.36	Agreement between Matthew W. Emmens and Vertex, dated February 5, 2009.*		8-K (Exhibit 10.1)	February 10, 2009	000-19319
10.38	Transition Agreement between Matthew W. Emmens and Vertex, dated December 14, 2011.*	X			
10.39	Employee Non-disclosure, Non-competition and Inventions Agreement between Matthew W. Emmens and Vertex, dated February 5, 2009.*		8-K (Exhibit 10.2)	February 10, 2009	000-19319
10.40	Amended and Restated Employment Agreement, dated February 5, 2010, between Peter Mueller and Vertex.*		10-Q (Exhibit 10.1)	May 3, 2010	000-19319
10.41	Amended and Restated Change of Control Agreement, dated February 5, 2010, between Vertex and Peter Mueller.*		10-Q (Exhibit 10.2)	May 3, 2010	000-19319
10.42	Amended and Restated Employment Agreement, dated as of November 8, 2004, between Vertex and Ian F. Smith.*		10-Q (Exhibit 10.13)	November 9, 2004	000-19319
10.43	Amendment No. 1 to Amended and Restated Employment Agreement between Ian F. Smith and Vertex, dated December 29, 2008.*		10-K (Exhibit 10.66)	February 17, 2009	000-19319
10.44	Employment Agreement, dated as of December 9, 2009 between Vertex and Nancy Wysenski.*		10-K (Exhibit 10.42)	February 19, 2010	000-19319
10.45	Change of Control Agreement, dated as of December 9, 2009 between Vertex and Nancy Wysenski.*		10-K (Exhibit 10.43)	February 19, 2010	000-19319
10.46	Amended and Restated Employment Agreement, dated February 5, 2010, between Lisa Kelly-Croswell and Vertex.*		10-Q (Exhibit 10.5)	May 3, 2010	000-19319
10.47	Amended and Restated Change of Control Agreement, dated February 5, 2010, between Vertex and Lisa Kelly-Croswell.*		10-Q (Exhibit 10.6)	May 3, 2010	000-19319
10.48	Amended and Restated Employment Agreement, dated February 5, 2010, between Amit Sachdev and Vertex.*		10-Q (Exhibit 10.3)	May 3, 2010	000-19319
10.49	Amended and Restated Change of Control Agreement, dated February 5, 2010, between Amit Sachdev and Vertex.*		10-Q (Exhibit 10.4)	May 3, 2010	000-19319
10.50	Employment Agreement, dated as of January 26, 2012 between Vertex and David T. Howton.*	X			
10.51	Change of Control Agreement, dated as of January 26, 2012 between Vertex and David T. Howton.*	X			
10.52	Employment Agreement, dated as of January 31, 2012 between Vertex and Christiana Stamoulis.*	X			
10.53	Change of Control Agreement, dated as of January 31, 2012 between Vertex and Christiana Stamoulis.*	X			

<u>Exhibit Number</u>	<u>Exhibit Description</u>	<u>Filed with this report</u>	<u>Incorporated by Reference herein from—Form or Schedule</u>	<u>Filing Date/ Period Covered</u>	<u>SEC File/ Reg. Number</u>
10.54	Form of Employee Non-Disclosure and Inventions Agreement.*		S-1 (Exhibit 10.4)	May 30, 1991	33-40966
10.55	Vertex Pharmaceuticals Incorporated Executive Compensation Program.*		10-Q (Exhibit 10.6)	May 12, 2008	000-19319
10.56	Vertex Employee Compensation Plan.*	X			
10.57	Vertex Pharmaceuticals Non-Employee Board Compensation.*	X			
21.1	Subsidiaries of Vertex Pharmaceuticals Incorporated.	X			
23.1	Consent of Independent Registered Public Accounting Firm Ernst & Young LLP.	X			
31.1	Certification of the Chief Executive Officer under Section 302 of the Sarbanes-Oxley Act of 2002.	X			
31.2	Certification of the Chief Financial Officer under Section 302 of the Sarbanes-Oxley Act of 2002.	X			
32.1	Certification of the Chief Executive Officer and the Chief Financial Officer under Section 906 of the Sarbanes-Oxley Act of 2002.	X			
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**				

* Management contract, compensatory plan or agreement.

** Pursuant to applicable securities laws and regulations, we will be deemed to have complied with the reporting obligation relating to the submission of interactive data files in such exhibits and will not be subject to liability under any anti-fraud provisions of the federal securities laws with respect to such interactive data files as long as we have made a good faith attempt to comply with the submission requirements and promptly amend the interactive data files after becoming aware that the interactive data files fail to comply with the submission requirements. Users of this data are advised that, pursuant to Rule 406T of Regulation S-T, these interactive data files are deemed not filed and otherwise are not subject to liability, except as provided by applicable securities laws and regulations.

† Confidential portions of this document have been filed separately with the Securities and Exchange Commission pursuant to a request for confidential treatment.

SIGNATURES

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

VERTEX PHARMACEUTICALS INCORPORATED

February 22, 2012

By:

/s/ JEFFREY M. LEIDEN

Jeffrey M. Leiden
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ MATTHEW W. EMMENS</u> Matthew W. Emmens	Executive Chairman and Chairman of the Board	February 22, 2012
<u>/s/ JEFFREY M. LEIDEN</u> Jeffrey M. Leiden	Chief Executive Officer, President and Director (Principal Executive Officer)	February 22, 2012
<u>/s/ IAN F. SMITH</u> Ian F. Smith	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 22, 2012
<u>/s/ PAUL M. SILVA</u> Paul M. Silva	Senior Vice President and Corporate Controller (Principal Accounting Officer)	February 22, 2012
<u>/s/ JOSHUA S. BOGER</u> Joshua S. Boger	Director	February 22, 2012
<u>/s/ TERRENCE C. KEARNEY</u> Terrence C. Kearney	Director	February 22, 2012
<u>/s/ MARGARET G. MCGLYNN</u> Margaret G. McGlynn	Director	February 22, 2012
<u>/s/ WAYNE J. RILEY</u> Wayne J. Riley	Director	February 22, 2012
<u>/s/ BRUCE I. SACHS</u> Bruce I. Sachs	Director	February 22, 2012
<u>/s/ ELAINE S. ULLIAN</u> Elaine S. Ullian	Director	February 22, 2012
<u>/s/ DENNIS L. WINGER</u> Dennis L. Winger	Director	February 22, 2012

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of
Vertex Pharmaceuticals Incorporated

We have audited the accompanying consolidated balance sheets of Vertex Pharmaceuticals Incorporated as of December 31, 2011 and 2010, and the related consolidated statements of operations, shareholders' equity, comprehensive income (loss) and noncontrolling interest, and cash flows for each of the three years in the period ended December 31, 2011. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Vertex Pharmaceuticals Incorporated at December 31, 2011 and 2010, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2011, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Vertex Pharmaceuticals Incorporated's internal control over financial reporting as of December 31, 2011, based on the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commissions and our report dated February 22, 2012 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Boston, Massachusetts
February 22, 2012

VERTEX PHARMACEUTICALS INCORPORATED

Consolidated Statements of Operations

(in thousands, except per share amounts)

	Year Ended December 31,		
	2011	2010	2009
Revenues:			
Product revenues, net	\$ 950,889	\$ —	\$ —
Royalty revenues	50,015	30,244	28,320
Collaborative revenues	409,722	113,126	73,569
Total revenues	1,410,626	143,370	101,889
Costs and expenses:			
Cost of product revenues	63,625	—	—
Royalty expenses	16,880	12,730	14,202
Research and development expenses	707,706	637,416	550,274
Sales, general and administrative expenses	400,721	187,800	130,192
Restructuring expense	2,074	1,501	6,240
Intangible asset impairment charge	105,800	—	7,200
Acquisition-related expenses	—	—	7,793
Total costs and expenses	1,296,806	839,447	715,901
Income (loss) from operations	113,820	(696,077)	(614,012)
Interest income	1,878	1,955	5,010
Interest expense	(38,452)	(19,275)	(13,192)
Change in fair value of derivative instruments	(16,801)	(41,229)	(1,847)
Loss on exchanges of convertible senior subordinated notes (due 2013)	—	—	(18,137)
Income (loss) before provision for income taxes	60,445	(754,626)	(642,178)
Provision for income taxes	19,266	—	—
Net income (loss)	41,179	(754,626)	(642,178)
Net income attributable to noncontrolling interest (Alios)	11,605	—	—
Net income (loss) attributable to Vertex	\$ 29,574	\$ (754,626)	\$ (642,178)
Net income (loss) per share attributable to Vertex common shareholders:			
Basic	\$ 0.14	\$ (3.77)	\$ (3.71)
Diluted	\$ 0.14	\$ (3.77)	\$ (3.71)
Shares used in per share calculations:			
Basic	204,891	200,402	173,259
Diluted	208,807	200,402	173,259

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

VERTEX PHARMACEUTICALS INCORPORATED

Consolidated Balance Sheets

(in thousands, except share and per share amounts)

	December 31,	
	2011 ⁽¹⁾	2010
Assets		
Current assets:		
Cash and cash equivalents	\$ 475,320	\$ 243,197
Marketable securities, available for sale	493,602	788,214
Restricted cash and cash equivalents (Alios)	51,878	—
Accounts receivable, net	183,135	12,529
Inventories	112,430	—
Prepaid expenses and other current assets	14,889	13,099
Total current assets	<u>1,331,254</u>	<u>1,057,039</u>
Restricted cash	34,090	34,090
Property and equipment, net	133,176	72,333
Intangible assets	663,500	518,700
Goodwill	30,992	26,102
Other assets	11,268	17,182
Total assets	<u>\$ 2,204,280</u>	<u>\$ 1,725,446</u>
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	\$ 74,642	\$ 35,851
Accrued expenses and other current liabilities	252,299	134,414
Accrued interest	3,363	3,462
Deferred revenues, current portion	45,037	74,619
Accrued restructuring expense, current portion	4,932	5,497
Secured notes (due 2012)	—	136,991
Liability related to sale of milestone payments	—	77,799
Income taxes payable (Alios)	12,075	—
Other obligations	—	6,150
Total current liabilities	<u>392,348</u>	<u>474,783</u>
Deferred revenues, excluding current portion	118,095	160,049
Accrued restructuring expense, excluding current portion	21,381	24,098
Convertible senior subordinated notes (due 2015)	400,000	400,000
Deferred tax liability	243,707	160,278
Construction financing obligation	55,950	—
Other liabilities	7,287	2,265
Total liabilities	<u>1,238,768</u>	<u>1,221,473</u>
Commitments and contingencies (Note T and Note U)		
Redeemable noncontrolling interest (Alios)	37,036	—
Shareholders' equity:		
Preferred stock, \$0.01 par value; 1,000,000 shares authorized; none issued and outstanding at December 31, 2011 and 2010	—	—
Common stock, \$0.01 par value; 300,000,000 shares authorized at December 31, 2011 and 2010; 209,303,995 and 203,522,976 shares issued and outstanding at December 31, 2011 and 2010, respectively	2,072	2,016
Additional paid-in capital	4,200,659	3,947,433
Accumulated other comprehensive loss	(1,053)	(1,067)
Accumulated deficit	(3,414,835)	(3,444,409)
Total Vertex shareholders' equity	<u>786,843</u>	<u>503,973</u>
Noncontrolling interest (Alios)	141,633	—
Total shareholders' equity	<u>928,476</u>	<u>503,973</u>
Total liabilities and shareholders' equity	<u>\$ 2,204,280</u>	<u>\$ 1,725,446</u>

(1) Amounts include the assets and liabilities of Vertex's variable interest entity ("VIE"), Alios BioPharma, Inc. ("Alios"). Vertex's interests and obligations with respect to the VIE's assets and liabilities are limited to those accorded to Vertex in its agreement with Alios. See Note B, "Collaborative Arrangements," to these consolidated financial statements for amounts.

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

securities				(119)	(119)	(119)			
Foreign									
currency									
translation									
adjustment				133	133	133			
Net income					29,574	29,574	11,605	41,179	
Comprehensive						29,588	11,605	41,193	
income									
Issuances of									
common									
stock:									
Benefit									
plans	5,781	56	133,362			133,418	(25)	133,393	
Stock-based									
compensation									
expense			118,964			118,964	304	119,268	
Tax benefit									
from equity									
compensation			900			900	—	900	
Alien									
noncontrolling									
interest									
upon									
consolidation							130,486	130,486	36,299
Dividends on									
redeemable									
noncontrolling									
interest							(737)	(737)	737
Balance,									
December 31									
2011	209,304	\$ 2,072	\$4,200,659	\$ (1,053)	\$ (3,414,835)	\$ 786,843	\$ 141,633	\$ 928,476	\$ 37,036

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

VERTEX PHARMACEUTICALS INCORPORATED

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December 31,		
	2011	2010	2009
Cash flows from operating activities:			
Net income (loss)	\$ 41,179	\$ (754,626)	\$ (642,178)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization expense	35,041	30,459	30,107
Stock-based compensation expense	118,226	91,124	86,722
Other non-cash based compensation expense	8,525	6,552	6,044
Intangible asset impairment charge	105,800	—	7,200
Secured notes (due 2012) discount amortization expense	18,409	13,589	3,125
Change in fair value of derivative instruments	16,801	41,229	1,847
Deferred income taxes	(7,501)	—	(2,225)
Loss on disposal of property and equipment	55	39	2,211
Loss on exchanges of convertible senior subordinated notes (due 2013)	—	—	18,137
Other non-cash items, net	264	(31)	—
Changes in operating assets and liabilities, excluding the effects of the acquisitions of a variable interest entity (Alios) and business (ViroChem) :			
Accounts receivable, net	(170,606)	(2,923)	13,900
Inventories	(111,388)	—	—
Prepaid expenses and other current assets	(1,717)	(600)	2,070
Accounts payable	37,468	(1,182)	(15,057)
Accrued expenses and other liabilities	116,921	8,182	8,924
Excess tax benefit from share-based payment arrangements	(900)	—	—
Accrued restructuring expense	(3,282)	(4,422)	(47)
Accrued interest	(99)	3,031	(1,423)
Income taxes payable (Alios)	12,075	—	—
Deferred revenues	(71,536)	(65,863)	53,057
Net cash provided by (used in) operating activities	143,735	(635,442)	(427,586)
Cash flows from investing activities:			
Purchases of marketable securities	(721,545)	(1,234,719)	(1,186,701)
Sales and maturities of marketable securities	1,016,040	1,284,806	788,263
Payment for acquisition of ViroChem, net of cash acquired	—	—	(87,422)
Payment for acquisition of a variable interest entity (Alios)	(60,000)	—	—
Expenditures for property and equipment	(34,595)	(38,054)	(23,496)
Increase in restricted cash and cash equivalents	—	(3,777)	(55)
Decrease in restricted cash and cash equivalents (Alios)	12,695	—	—
Decrease (increase) in other assets	(183)	(955)	679
Net cash provided by (used in) investing activities	212,412	7,301	(508,732)
Cash flows from financing activities:			
Excess tax benefit from share-based payment arrangements	900	—	—
Issuances of common stock from employee benefit plans, net	124,862	33,434	47,850
Issuances of common stock from stock offerings, net	—	—	801,385
Issuance of convertible senior subordinated notes (due 2015), net	—	391,645	—
Issuance of secured notes (due 2012) and sale of milestone payments, net	—	—	149,902
Payments to redeem secured notes (due 2012)	(155,000)	—	—
Settlement of milestone derivatives	(95,000)	—	—
Debt conversion/exchange costs	—	(22)	(131)
Net cash (used in) provided by financing activities	(124,238)	425,057	999,006
Effect of changes in exchange rates on cash	214	(377)	(5,145)
Net increase (decrease) in cash and cash equivalents	232,123	(203,461)	57,543
Cash and cash equivalents—beginning of period	243,197	446,658	389,115
Cash and cash equivalents—end of period	\$ 475,320	\$ 243,197	\$ 446,658
Supplemental disclosure of cash flow information:			
Cash paid for interest	\$ 13,512	\$ 761	\$ 10,248
Cash paid for taxes	\$ —	\$ —	\$ —
Conversion/exchange of convertible senior subordinated notes (due 2013) for common stock	\$ —	\$ 32,071	\$ 255,429
Accrued interest offset to additional paid-in capital on conversion/exchange of convertible senior subordinated notes (due 2013)	\$ —	\$ 140	\$ 3,355
Unamortized debt issuance costs of converted/exchanged convertible senior subordinated notes (due 2013) offset to additional paid-in capital	\$ —	\$ 624	\$ 5,899
Capitalization of construction in-process related to financing lease transactions	\$ 54,655	\$ —	\$ —
Fair value of common stock issued to acquire ViroChem	\$ —	\$ —	\$ 290,557

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

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements

A. Nature of Business and Accounting Policies

Business

Vertex Pharmaceuticals Incorporated ("Vertex" or the "Company") is in the business of discovering, developing, manufacturing and commercializing small molecule drugs for the treatment of serious diseases. The Company's two products are INCIVEK™ (telaprevir), which is approved in the United States and Canada for the treatment of adults with genotype 1 hepatitis C virus infection, and KALYDECO™ (ivacaftor), which is approved in the United States for the treatment of patients six years of age or older with cystic fibrosis who have a specific genetic mutation that is referred to as the G551D mutation. The Company began recognizing net product revenues from sales of INCIVEK and related cost of product revenues in the second quarter of 2011. The Company's collaborator, Janssen Pharmaceutica, N.V. ("Janssen"), began marketing telaprevir in its territories under the brand name INCIVO™ in September 2011. The Company is seeking approval to market ivacaftor from the European Commission and plans to seek approval to market ivacaftor in a number of other countries, including Canada and Australia. The Company's net income attributable to Vertex for 2011 was \$29.6 million, or \$0.14 per diluted common share. As of December 31, 2011, the Company had cash, cash equivalents and marketable securities of \$968.9 million. The Company expects that the cash flows it expects to generate from the sales of its products and the royalties it expects to receive from Janssen, together with the Company's cash, cash equivalents and marketable securities, will be sufficient to fund its operations for at least the next twelve months.

Vertex is subject to risks common to companies in its industry including, but not limited to, the dependence on revenues from INCIVEK, competition, uncertainty about clinical trial outcomes, uncertainties relating to pharmaceutical pricing and reimbursement, rapid technological change, uncertain protection of proprietary technology, the need to comply with government regulations, share price volatility, dependence on collaborative relationships and potential product liability.

Basis of Presentation

The consolidated financial statements reflect the operations of (i) the Company, (ii) its wholly-owned subsidiaries and (iii) Alios BioPharma, Inc. ("Alios"), a collaborator that is a variable interest entity (a "VIE") for which the Company is deemed under applicable accounting guidance to be the primary beneficiary. All material intercompany balances and transactions have been eliminated. The Company operates in one segment, pharmaceuticals. Please refer to Note W, "Geographic Information," for information regarding the geographic breakout of the Company's revenues.

Use of Estimates

The preparation of consolidated financial statements in accordance with accounting principles generally accepted in the United States of America ("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 consolidated financial statements, and the amounts of revenues and expenses during the reported periods. Significant estimates in these consolidated financial statements have been made in connection with the calculation of revenues, research and development expenses, stock-based compensation expense, restructuring expense, the fair value of intangible assets, noncontrolling interest (Alios), income tax provision, derivative instruments and debt securities. 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

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

circumstances. Actual results could differ from those estimates. Changes in estimates are reflected in reported results in the period in which they become known.

Revenue Recognition

Product Revenues, Net

The Company sells INCIVEK principally to a limited number of major wholesalers, as well as selected regional wholesalers and specialty pharmacy providers (collectively, its "Distributors"), that subsequently resell INCIVEK to patients and health care providers. The Company recognizes net product revenues from sales of INCIVEK upon delivery to the Distributor as long as (i) there is persuasive evidence that an arrangement exists between the Company and the Distributor, (ii) collectibility is reasonably assured and (iii) the price is fixed or determinable.

The Company has written contracts with its Distributors and delivery occurs when a Distributor receives INCIVEK. The Company evaluates the creditworthiness of each of its Distributors to determine whether revenues can be recognized upon delivery, subject to satisfaction of the other requirements, or whether recognition is required to be delayed until receipt of payment. In order to conclude that the price is fixed or determinable, the Company must be able to (i) calculate its gross product revenues from the sales to Distributors and (ii) reasonably estimate its net product revenues. The Company calculates gross product revenues based on the wholesale acquisition cost that the Company charges its Distributors for INCIVEK. 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 distributor fees, (b) estimated government and private payor rebates, chargebacks and discounts, such as Medicaid reimbursements, (c) reserves for expected product returns and (d) estimated costs of incentives offered to certain indirect customers, including patients.

Trade Allowances: The Company generally provides invoice discounts on INCIVEK sales to its Distributors for prompt payment and pays fees for distribution services, such as fees for certain data that Distributors provide to the Company. The payment terms for sales to Distributors generally include a 2% discount for payment within 30 days. The Company expects its Distributors to earn these discounts and fees, and deducts the full amount of these discounts and fees from its gross product revenues and accounts receivable at the time such revenues are recognized.

Rebates, Chargebacks and Discounts: The Company contracts with Medicaid, other government agencies and various private organizations (collectively, its "Third-party Payors") so that INCIVEK will be eligible for purchase by, or partial or full reimbursement from, such Third-party Payors. The Company estimates the rebates, chargebacks and discounts it will provide to Third-party Payors and deducts these estimated amounts from its gross product revenues at the time the revenues are recognized. The Company estimates the rebates, chargebacks and discounts that it will provide to Third-party Payors based upon (i) the Company's contracts with these Third-party Payors, (ii) the government-mandated discounts applicable to government-funded programs and (iii) information obtained from the Company's Distributors and other third parties regarding the payor mix for INCIVEK.

Product Returns: The Company estimates the amount of INCIVEK that will be returned and deducts these estimated amounts from its gross revenues at the time the revenues are recognized. The Company's Distributors have the right to return unopened unprescribed INCIVEK beginning

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

six months prior to the labeled expiration date and ending twelve months after the labeled expiration date. The expiration date for INCIVEK is two years after it has been converted into tablet form, which is the last step in the manufacturing process for INCIVEK and generally occurs within a few months before INCIVEK is delivered to Distributors. As of December 31, 2011, the Company had not received any material product returns. From May 23, 2011 (the date the Company began selling INCIVEK) through December 31, 2011, the Company was able to reasonably estimate product returns based on its specialty distribution model with sales to a limited number of distributors, data provided to the Company by its Distributors (including weekly reporting of Distributors' sales and inventory held by Distributors that provided the Company with visibility into the distribution channel in order to determine what quantities, if any, were eligible to be returned), data provided to the Company by other third parties, historical industry information regarding return rates for similar specialty pharmaceutical products, the estimated remaining shelf life of INCIVEK previously shipped and currently being shipped to Distributors, and contractual agreements intended to limit the amount of inventory maintained by the Company's Distributors. Based on the Company's visibility into the distribution channel and available prescription data, the Company believes that most of the INCIVEK inventory held by its Distributors on December 31, 2011 has already been dispensed to patients in the first quarter of 2012.

Other Incentives: Other incentives that the Company offers to indirect customers include co-pay mitigation rebates provided by the Company to commercially insured patients who have coverage for INCIVEK and who reside in states that permit co-pay mitigation programs. The Company's co-pay mitigation program is intended to reduce each participating patient's portion of the financial responsibility for INCIVEK's purchase price to a specified dollar amount. Based upon the terms of the program and information regarding programs provided for similar specialty pharmaceutical products, the Company estimates the average co-pay mitigation amounts and the percentage of patients that it expects to participate in the program in order to establish its accruals for co-pay mitigation rebates and deducts these estimated amounts from its gross product revenues at the time the revenues are recognized. The Company's co-pay mitigation rebates offered to date expire six months from the date of issuance. A portion of the co-pay mitigation rebates the Company issued in the second quarter of 2011 expired in the fourth quarter of 2011. Based on this information, beginning in the fourth quarter, the Company began adjusting its accruals for co-pay mitigation rebates based on its estimates regarding the portion of issued rebates that it estimates will not be redeemed.

The following table summarizes activity in each of the product revenue allowance and reserve categories described above from May 23, 2011 through December 31, 2011:

	Trade Allowances	Rebates, Chargebacks and Discounts	Product Returns	Other Incentives	Total
	(in thousands)				
Balance at May 23, 2011	\$ —	\$ —	\$ —	\$ —	\$ —
Provision related to current period sales	38,228	75,145	553	9,692	123,618
Credits/payments made for current period sales	(27,066)	(22,486)	(213)	(4,490)	(54,255)
Balance at December 31, 2011	<u>\$ 11,162</u>	<u>\$ 52,659</u>	<u>\$ 340</u>	<u>\$ 5,202</u>	<u>\$ 69,363</u>

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

Royalty Revenues

The Company's royalty revenues on commercial sales of INCIVO (telaprevir) by Janssen are based on net sales of licensed products in licensed territories as provided by Janssen. The Company recognizes royalty revenues in the period the sales occur.

The Company has sold its rights to receive certain royalties on sales of an HIV protease inhibitor (fosamprenavir) and recognizes the revenues related to this sale as royalty revenues. In the circumstance where the Company has sold its rights to future royalties under a license agreement and also maintains continuing involvement in the royalty arrangement (but not significant continuing involvement in the generation of the cash flows payable to the purchaser of the future royalty rights), the Company defers recognition of the proceeds it receives for the royalty stream and recognizes these deferred revenues over the life of the license agreement pursuant to the units-of-revenue method. The Company's estimates regarding the estimated remaining royalty payments due to the purchaser have changed in the past and may change in the future.

Collaborative Revenues

The Company also recognizes revenues generated through collaborative research, development and/or commercialization agreements. The terms of these agreements typically include payment to the Company of one or more of the following: nonrefundable, up-front license fees; development and commercial milestone payments; funding of research and/or development activities; payments for services the Company provides through its third-party manufacturing network; and royalties on net sales of licensed products. Each of these types of payments results in collaborative revenues, except for revenues from royalties on net sales of licensed products, which are classified as royalty revenues.

Agreements Entered into prior to January 1, 2011

Collaborative research, development and/or commercialization agreements entered into prior to January 1, 2011 that contain multiple elements of revenue are divided into separate units of accounting if certain criteria are met, including whether the delivered element has stand-alone value to the collaborator and whether there is objective and reliable evidence of the fair value of the undelivered obligation(s). The Company allocates consideration it receives among the separate units either on the basis of each unit's fair value or using the residual method, and applies the applicable revenue recognition criteria to each of the separate units.

Up-front License Fees

The Company recognizes revenues from nonrefundable, up-front license fees on a straight-line basis over the contracted or estimated period of performance, which is typically the period over which the research and development is expected to occur or manufacturing services are expected to be provided. In order to estimate the period of performance, the Company is required to make estimates regarding the drug development and commercialization timelines for drugs and drug candidates being developed pursuant to the applicable agreement. The Company's estimates regarding the period of performance under certain of its collaboration agreements did not change during 2011, but have changed in the past and may change in the future.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

Milestone Payments

At the inception of each agreement that includes research and development milestone payments, the Company evaluates whether each milestone is substantive on the basis of the contingent nature of the milestone, specifically reviewing factors such as the scientific and other risks that must be overcome to achieve the milestone, as well as the level of effort and investment required. The Company recognizes revenues related to substantive milestones in full in the period in which the substantive milestone is achieved if payment is reasonably assured. If a milestone is not considered substantive, the Company recognizes the applicable milestone payment over the period of performance. Commercial milestone payments are recognized in full upon achievement, if payment is reasonably assured.

Research and Development Activities/Manufacturing Services

Under certain of its collaboration agreements, the Company is entitled to reimbursement from its collaborators for specified research and development expenses and/or payments for specified manufacturing services that the Company provides through its third-party manufacturing network. The Company considers the nature and contractual terms of the arrangement and the nature of the Company's business operations in order to determine whether research and development funding will result in collaborative revenues or an offset to research and development expenses. The Company typically recognizes the revenues related to these reimbursable expenses and manufacturing services in the period in which the reimbursable expenses are incurred or the manufacturing services are provided.

Agreements Entered into or Materially Modified on or after January 1, 2011

On January 1, 2011, updated guidance on the recognition of revenues for agreements with multiple deliverables became effective and applies to any agreements entered into or materially modified by the Company on or after January 1, 2011. This updated guidance (i) relates to whether multiple deliverables exist, how the deliverables in a revenue arrangement should be separated and how the consideration should be allocated; (ii) requires companies to allocate revenues in an arrangement using management's best estimate of selling prices of deliverables if a vendor does not have vendor-specific objective evidence or third-party evidence of selling price; and (iii) eliminates the use of the residual method and requires companies to allocate revenues using the relative selling price method. During 2011, the Company did not enter into any material agreements or material modifications to existing agreements that would be accounted for by the Company pursuant to this updated guidance. If the Company enters into or materially modifies an agreement with multiple deliverables, this updated guidance could have a material effect on the Company's consolidated financial statements in future periods.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist principally of money market funds and marketable securities. The Company places these investments with highly rated financial institutions, and, by policy, limits the amounts of credit exposure to any one financial institution. These amounts at times may exceed federally insured limits. The Company has not experienced any credit losses in these accounts and does not believe it is exposed to any significant credit risk on these funds. The Company has no foreign exchange contracts, option contracts or other foreign exchange hedging arrangements.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

In 2011, the Company's revenues were generated from net product sales to Distributors and a limited number of collaborators in the United States, Europe and Japan. Management believes the credit risks associated with these customers are not significant. The following table summarizes gross revenues and accounts receivable, net from each of the Company's customers who individually accounted for 10% or more of total gross revenues and/or 10% or more of total accounts receivable, net:

	<u>Percent of Total Gross Revenues</u>			<u>Percent of Accounts Receivable, Net</u>	
	<u>Year Ended December 31,</u>			<u>At December 31,</u>	
	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2011</u>	<u>2010</u>
AmerisourceBergen Drug Corporation	25%	—	—	35%	—
McKesson Corporation	24%	—	—	30%	—
Cardinal Health Incorporated	15%	—	—	20%	—
Janssen	19%	21%	54%	10%	12%
Mitsubishi Tanabe Pharma Corporation	<10%	57%	18%	<10%	55%
GlaxoSmithKline plc	<10%	<10%	<10%	<10%	23%

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents. Cash equivalents consist principally of money market funds and debt securities. Changes in cash and cash equivalents may be affected by shifts in investment portfolio maturities as well as by actual cash receipts and disbursements.

Restricted Cash

Restricted cash consists of balances held in deposit with certain banks predominantly to collateralize conditional stand-by letters of credit in the names of the Company's landlords pursuant to certain operating lease agreements. The Company also separately discloses on its consolidated balance sheets restricted cash and cash equivalents (Alios). Please refer to Note B, "Collaborative Arrangements," for further information.

Marketable Securities

Marketable securities consist of investments in U.S. Treasuries, government-sponsored enterprise securities and high-grade corporate bonds and commercial paper that are classified as available-for-sale. The Company classifies marketable securities available to fund current operations as current assets on its consolidated balance sheets. Marketable securities are classified as long-term assets on the consolidated balance sheets if (i) they have been in an unrealized loss position for longer than one year and (ii) the Company has the ability and intent to hold them (a) until the carrying value is recovered and (b) such holding period may be longer than one year. Marketable securities are stated at fair value with their unrealized gains and losses included as a component of accumulated other comprehensive income (loss), which is a separate component of shareholders' equity, until such gains and losses are realized. The fair value of these securities is based on quoted prices for identical or similar assets. If a decline in the fair value is considered other-than-temporary, based on available evidence, the unrealized loss is transferred from other comprehensive income (loss) to the consolidated statements of operations. There were no charges taken for other-than-temporary declines in fair value of marketable securities in 2011, 2010 or 2009. Realized gains and losses are determined using the specific

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

identification method and are included in interest income in the consolidated statements of operations. There were no gross realized gains and losses recognized in 2011, 2010 or 2009.

The Company reviews investments in marketable securities for other-than-temporary impairment whenever the fair value of an investment is less than amortized cost and evidence indicates that an investment's carrying amount is not recoverable within a reasonable period of time. To determine whether an impairment is other-than-temporary, the Company considers the intent to sell, or whether it is more likely than not that the Company will be required to sell, the investment before recovery of the investment's amortized cost basis. Evidence considered in this assessment includes reasons for the impairment, compliance with the Company's investment policy, the severity and the duration of the impairment and changes in value subsequent to year end. Please refer to Note F, "Marketable Securities," for further information.

Stock-based Compensation Expense

The Company expenses the fair value of employee stock options and other forms of stock-based employee compensation over the associated employee service period or for awards with market conditions, the derived service period. For awards with performance conditions, the Company estimates the likelihood of satisfaction of the performance conditions, which affects the period over which the expense is recognized. Compensation expense is determined based on the fair value of the award at the grant date, including estimated forfeitures, and is adjusted each period to reflect actual forfeitures and the outcomes of certain market and performance conditions. Please refer to Note M, "Stock-based Compensation Expense," for further information.

Research and Development Expenses

The Company expenses as incurred all research and development expenses, including amounts funded by research and development collaborations. The Company defers and capitalizes nonrefundable advance payments made by the Company for research and development activities until the related goods are delivered or the related services are performed.

Research and development expenses are comprised of costs incurred by the Company in performing research and development activities, including salary and benefits; stock-based compensation expense; laboratory supplies and other direct expenses; contractual services costs, including clinical trial and pharmaceutical development costs; expenses associated with drug supplies that are not being capitalized; and infrastructure costs, including facilities costs and depreciation expense.

The Company's collaborators funded portions of the Company's research and development programs related to specific drugs, drug candidates and research targets, including, in 2011 telaprevir, VX-661 and research directed toward identifying additional corrector compounds for the treatment of cystic fibrosis, and in 2010 and 2009 telaprevir. The Company's collaborative revenues, including amortization of up-front license fees and milestone revenues, were \$409.7 million \$113.1 million and \$73.6 million, respectively, in 2011, 2010 and 2009. The Company's research and development expenses allocated to programs in which a collaborator funded at least a portion of the research and development expenses were approximately \$146 million, \$156 million and \$149 million, respectively, in 2011, 2010 and 2009.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

Sales, General and Administrative Expenses

Sales, general and administrative expenses consist primarily of personnel costs, related benefits and stock-based compensation expense for the Company's sales, marketing, and managed markets personnel and personnel serving executive, finance, medical affairs, business development, legal, quality assurance, information technology and human resource functions. Other costs include facility costs not otherwise included in research and development expenses as well as professional fees for legal and accounting services. Advertising costs, which were \$30.8 million in 2011, also are included in sales, general and administrative expenses and are expensed as incurred.

Inventories

The Company values its inventories at the lower of cost or market. The Company determines the cost of its inventories, which includes amounts related to materials and manufacturing overhead, on a first-in, first-out basis. If the Company identifies excess, obsolete or unsalable items, its inventories are written down to their realizable value in the period in which the impairment is first identified. Shipping and handling costs incurred for inventory purchases and product shipments are recorded in cost of product revenues in the Company's consolidated statements of operations.

The Company capitalizes inventories produced in preparation for initiating sales of a drug candidate when the related drug candidate is considered to have a high likelihood of regulatory approval and the related costs are expected to be recoverable through sales of the inventories. In determining whether or not to capitalize such inventories, the Company evaluates, among other factors, information regarding the drug candidate's safety and efficacy, the status of regulatory submissions and communications with regulatory authorities and the outlook for commercial sales, including the existence of current or anticipated competitive drugs and the availability of reimbursement. In addition, the Company evaluates risks associated with manufacturing the drug candidate and the remaining shelf life of the inventories. Please refer to Note G, "Inventories," for further information.

Property and Equipment

Property and equipment are recorded at cost. Depreciation and amortization is provided using the straight-line method over the estimated useful life of the related asset, generally four to seven years for furniture and equipment and three to five years for computers and software. Leasehold improvements are amortized using the straight-line method over the lesser of the useful life of the improvements or the estimated remaining life of the associated lease. Major additions and betterments are capitalized. Maintenance and repairs to an asset that do not improve or extend its life are charged to operations. When assets are retired or otherwise disposed of, the assets and related allowances for depreciation and amortization are eliminated from the accounts and any resulting gain or loss is reflected in the Company's consolidated statements of operations.

The Company records certain construction costs incurred by a landlord as an asset and corresponding financing obligation on the Company's consolidated balance sheets. Please refer to Note I, "Fan Pier Leases" for further information.

Income Taxes

Deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial statement carrying amounts and the income tax bases of

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

assets and liabilities. A valuation allowance is applied against any net deferred tax asset if, based on the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

Financial Transaction Expenses

Issuance costs incurred to complete the Company's convertible senior subordinated note offerings and the financial transactions that the Company entered into in September 2009 were deferred and included in other assets on the Company's consolidated balance sheets. The issuance costs are amortized using the effective interest rate method over the term of the related debt or financial instrument. The amortization expense related to the issuance costs is included in interest expense on the consolidated statements of operations.

The Company defers direct and incremental costs associated with the sale of its rights to future royalties. These costs are included in other assets on the Company's consolidated balance sheets and are amortized in the same manner and over the same period during which the related deferred revenues are recognized as royalty revenues. The amortization expense related to these transaction expenses is included in royalty expenses on the consolidated statements of operations. Expenses incurred in connection with common stock issuances are recorded as an offset to additional paid-in capital on the consolidated balance sheets.

Variable Interest Entities

The Company reviews each collaboration agreement pursuant to which the Company licenses assets owned by a collaborator in order to determine whether or not the collaborator is a VIE. If the collaborator is a VIE, the Company assesses whether or not the Company is the primary beneficiary of that VIE based on a number of factors, including (i) which party has the power to direct the activities that most significantly affect the VIE's economic performance, (ii) the parties' contractual rights and responsibilities pursuant to the collaboration and (iii) which party has the obligation to absorb losses or the right to receive benefits from the VIE. If the Company determines it is the primary beneficiary of a VIE, the Company consolidates the statements of operations and financial condition of the VIE into the Company's consolidated financial statements. As of June 13, 2011 (the effective date of the Company's collaboration agreement with Alios) and December 31, 2011, the Company evaluated its collaboration with Alios (the "Alios Collaboration") and determined that Alios is a VIE and that the Company is Alios' primary beneficiary. The Company will re-evaluate the Alios Collaboration each reporting period in order to determine if there are changes in circumstances that would result in the Company ceasing to consolidate the statements of operations and financial condition of Alios into the Company's consolidated financial statements. The Company would deconsolidate Alios if Alios ceased to be a VIE or if the Company was no longer Alios' primary beneficiary. Please refer to Note B, "Collaborative Arrangements," for further information.

Business Combinations

The Company assigns the value of consideration, including contingent consideration, transferred in business combinations based on its fair value as of the effective date of the transaction. The Company accounts for the Alios Collaboration as a business combination due to its determination that (i) Alios is a VIE, (ii) Alios is a business and (iii) the Company is Alios' primary beneficiary. Transaction costs and any restructuring costs associated with these transactions are expensed as incurred.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

Fair Value of In-process Research and Development Assets and Contingent Payments in Business Combinations

The Company assesses the fair value of assets, including the fair value of in-process research and development assets and contingent payments pursuant to collaborations accounted for as business combinations, from the perspective of a market participant, using a variety of methods. The present-value models used to estimate the fair values of research and development assets and contingent payments pursuant to collaborations incorporate significant assumptions, including: assumptions regarding the probability of obtaining marketing approval and/or achieving relevant development milestones for a drug candidate; estimates regarding the timing of and the expected costs to develop a drug candidate; estimates of future cash flows from potential product sales and/or the potential to achieve certain commercial milestones with respect to a drug candidate; and the appropriate discount rates.

In-process Research and Development Assets

In-process research and development assets relate to (i) the Company's acquisition of ViroChem Pharma Inc. ("ViroChem") in March 2009 and (ii) the Alios Collaboration. The Company records the value of in-process research and development assets at their fair value as of the transaction date. Each of these assets is accounted for as an indefinite-lived intangible asset and maintained on the Company's consolidated balance sheet until either the project underlying it is completed or the asset becomes impaired. If a project is completed, the carrying value of the related intangible asset is amortized as a part of cost of product revenues over the remaining estimated life of the asset beginning in the period in which the project is completed. If the asset becomes impaired or is abandoned, the carrying value of the related intangible asset is written down to its fair value and an impairment charge is taken in the period in which the impairment occurs. In-process research and development assets are tested for impairment on an annual basis as of October 1, and more frequently if indicators are present or changes in circumstances suggest that impairment may exist. Please refer to Note B, "Collaborative Arrangements," and Note C, "Acquisition of ViroChem Pharma Inc.," for further information.

Goodwill

The difference between the purchase price and the fair value of assets acquired and liabilities assumed in a business combination, or deemed to be acquired or assumed in other transactions treated as business combinations for accounting purposes, is allocated to goodwill. As of December 31, 2010, goodwill consisted of goodwill related to the Company's acquisition of ViroChem. As of December 31, 2011, goodwill consisted of goodwill related to the Company's acquisition of ViroChem and the Alios Collaboration. Goodwill is evaluated for impairment on an annual basis as of October 1, and more frequently if indicators are present or changes in circumstances suggest that impairment may exist.

Derivative Instruments and Embedded Derivatives

The Company has entered into financial transactions involving free-standing derivative instruments and embedded derivatives. These financial transactions include arrangements involving secured notes, the sale of contingent milestone payments and senior subordinated convertible notes. The embedded derivatives are required to be bifurcated from the host instruments because the derivatives are not clearly and closely related to the host instruments. The Company determines the fair value of each derivative instrument or embedded derivative on the date of issuance and at the end of each quarterly

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

period. The estimates of the fair value of these derivatives, particularly with respect to derivatives related to the achievement of milestones in the development of telaprevir, included significant assumptions regarding the estimates market participants would make in order to evaluate these derivatives. Please refer to Note K, "Common Stock Offerings and Convertible Senior Subordinated Notes," and Note N, "September 2009 Financial Transactions," for further information.

Restructuring Expense

The Company records costs and liabilities associated with exit and disposal activities based on estimates of fair value in the period the liabilities are incurred. In periods subsequent to the initial measurement, the Company measures changes to the liability using the credit-adjusted risk-free discount rate applied in the initial period. The Company evaluates and adjusts these liabilities as appropriate for changes in circumstances at least on a quarterly basis. Please refer to Note R, "Restructuring Expense," for further information.

Comprehensive Income (Loss)

Comprehensive income (loss) consists of net income (loss) and other comprehensive income (loss), which includes foreign currency translation adjustments and unrealized gains and losses on certain marketable securities. For purposes of comprehensive income (loss) disclosures, the Company does not record tax provisions or benefits for the net changes in foreign currency translation adjustment, as the Company intends to permanently reinvest undistributed earnings in its foreign subsidiaries.

Foreign Currency Translation

All material consolidated entities have the U.S. dollar as their functional currency except the functional currency of the Company's United Kingdom subsidiaries is the local currency. Non-U.S. dollar functional currency subsidiaries have assets and liabilities translated into U.S. dollars at rates of exchange in effect at the end of the year. Revenue and expense amounts are translated using the average exchange rates for the period. Net unrealized gains and losses resulting from foreign currency translation are included in accumulated other comprehensive income (loss), which is a separate component of shareholders' equity. Included in accumulated other comprehensive income (loss) is a net unrealized loss related to foreign currency translation of \$0.9 million, \$1.1 million and \$0.6 million at December 31, 2011, 2010, and 2009, respectively.

Recent Accounting Pronouncements

In September 2011, the Financial Accounting Standards Board ("FASB") amended guidance regarding testing goodwill for impairment. This amended guidance allows an entity the option to first assess qualitative factors to determine whether it is necessary to perform a two-step impairment test. If an entity believes, as a result of its qualitative assessment, that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, the quantitative two-step impairment test is required; otherwise, no further testing is required. These amendments do not change the current guidance for testing other indefinite-lived intangible assets for impairment. This amended guidance became effective for annual and interim goodwill impairment tests performed by the Company for fiscal years beginning on January 1, 2012. The Company adopted this amended guidance early in connection with its October 1, 2011 goodwill assessment. The adoption of this guidance did not have a material effect on the Company's consolidated financial statements.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

A. Nature of Business and Accounting Policies (Continued)

In June 2011, the FASB issued amended guidance intended to increase the prominence of items reported in other comprehensive income (loss). This amended guidance requires that all non-owner changes in shareholders' equity be presented either in a single continuous statement of comprehensive income (loss) or in two separate but consecutive statements. The amended guidance became effective on January 1, 2012. The Company will apply this guidance retrospectively beginning with its quarterly report for the three months ending March 31, 2012. This amended guidance will affect presentation, but will not have a material effect on the Company's consolidated financial statements.

In May 2011, the FASB amended guidance regarding the measurement of the fair value of assets and liabilities to harmonize the fair value measurement guidance under GAAP and under the International Financial Reporting Standards. This amended guidance clarifies the FASB's intent regarding the application of existing fair value measurement requirements and changes a particular principle or requirement for measuring fair value or for disclosing information about fair value measurements. The amended guidance became effective on January 1, 2012. The Company will adopt this guidance on a prospective basis. The adoption of this amended guidance will not have a material effect on the Company's consolidated financial statements.

The Company did not adopt any new accounting pronouncements during 2011 that had a material effect on the Company's consolidated financial statements.

B. Collaborative Arrangements

Janssen Pharmaceutica, N.V.

In June 2006, the Company entered into a collaboration agreement with Janssen for the development, manufacture and commercialization of telaprevir, which Janssen began marketing under the brand name INCIVO™ in certain of its territories in September 2011. Under the agreement, Janssen agreed to be responsible for 50% of the drug development costs incurred under the development program for the parties' territories (North America for the Company, and the rest of the world, other than the Far East, for Janssen) and has exclusive rights to commercialize telaprevir in its territories including Europe, South America, the Middle East, Africa and Australia.

Janssen pays the Company a tiered royalty averaging in the mid-20% range, subject to adjustment for generic competition, as a percentage of net sales of INCIVO in Janssen's territories. Janssen is required pursuant to the agreement to use diligent efforts to maximize net sales of INCIVO in its territories through its commercial marketing, pricing and contracting strategies. In addition, Janssen is responsible for certain third-party royalties on net sales of INCIVO in its territories.

Janssen made a \$165.0 million up-front license payment to the Company in July 2006. The up-front license payment is being amortized over the Company's estimated period of performance under the collaboration agreement. The Company's estimates regarding the period of performance under the Janssen collaboration agreement were adjusted in 2007, 2009 and 2010, as a result of changes in the global development plan for telaprevir, which includes the conduct of certain development activities in the post-approval period. These adjustments were made on a prospective basis beginning in the periods in which the changes were identified and resulted in a decrease in the amount of revenues the Company recognized from the Janssen agreement by \$2.6 million per quarter for the first adjustment, by \$1.1 million per quarter for the second adjustment and by \$1.4 million per quarter for the third adjustment. As of December 31, 2011, there were \$55.9 million in deferred revenues related

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

B. Collaborative Arrangements (Continued)

to this up-front license payment that the Company expects to recognize over the remaining estimated period of performance.

Under the agreement, Janssen agreed to make contingent milestone payments for successful development, approval and launch of telaprevir as a product in its territories. At the inception of the agreement, the Company determined that all of these contingent milestones were substantive and would result in revenues in the period in which the milestone was achieved. As of December 31, 2011, the Company had earned \$350.0 million of these contingent milestone payments, including a \$50.0 million milestone payment in the first quarter of 2011 in connection with the European Medicines Agency's ("EMA") acceptance of the marketing authorization application ("MAA") for INCIVO and an aggregate of \$200.0 million in milestone payments in the third quarter of 2011 related to the approval of INCIVO by the European Commission and launch of INCIVO in the European Union. The Company does not expect to receive any further milestone payments pursuant to this agreement. On September 30, 2009, the Company entered into two financial transactions related to the \$50.0 million milestone payment that was earned in the first quarter of 2011 and the \$200.0 million in milestone payments that were earned in the third quarter of 2011. Please refer to Note N, "September 2009 Financial Transactions," for further information.

Under the collaboration agreement for telaprevir, each party incurs internal and external reimbursable expenses related to the telaprevir development program and is reimbursed for 50% of these expenses. The Company recognizes the full amount of the reimbursable costs it incurs as research and development expenses on its consolidated statements of operations. The Company recognizes the amounts that Janssen is obligated to pay the Company with respect to reimbursable expenses net of reimbursable expenses incurred by Janssen as collaborative revenues. During 2011, Janssen incurred more reimbursable costs than the Company, and the net amounts payable by the Company to reimburse Janssen for expenses for 2011 were recorded as a reduction of collaborative revenues.

Each of the parties is responsible for drug supply in their respective territories. The Company provides Janssen certain services through the Company's third-party manufacturing network for telaprevir. Reimbursements from Janssen for manufacturing services are recorded as collaborative revenues.

Janssen may terminate the agreement upon the later of (i) one year's advance notice and (ii) such period as may be required to assign and transfer to the Company specified filings and approvals. The 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 agreement will continue in effect until the expiration of Janssen's royalty obligations, which expire on a country-by-country basis with the last-to-expire patent covering telaprevir. In the European Union, the Company has a patent covering the composition-of-matter of telaprevir that expires in 2021 and expects to obtain extensions to the term of this patent through 2026.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

B. Collaborative Arrangements (Continued)

During the three years ended December 31, 2011, the Company recognized the following collaborative revenues attributable to the Janssen collaboration:

	<u>2011</u>	<u>2010</u>	<u>2009</u>
	(in thousands)		
Amortized portion of up-front payment	\$ 12,428	\$ 12,428	\$ 20,196
Milestone revenues	250,000	—	—
Net reimbursement (payment) for telaprevir development costs	(8,418)	9,245	27,711
Reimbursement for manufacturing services	20,383	9,077	6,733
Total collaborative revenues attributable to the Janssen collaboration	<u>\$ 274,393</u>	<u>\$ 30,750</u>	<u>\$ 54,640</u>

In 2011, the Company also recognized \$20.3 million in royalty revenues from net sales of INCIVO by Janssen.

Mitsubishi Tanabe Pharma Corporation

The Company has a collaboration agreement with Mitsubishi Tanabe (the "MTPC Agreement") pursuant to which Mitsubishi Tanabe has a fully-paid license to manufacture and commercialize TELAVIC (telaprevir) to treat HCV infection in Japan and specified other countries in the Far East. In September 2011, Mitsubishi Tanabe obtained approval to market TELAVIC in Japan.

The MTPC Agreement was entered into in 2004 and amended in 2009. Pursuant to the MTPC Agreement, Mitsubishi Tanabe provided financial and other support for the development and commercialization of telaprevir, made a \$105.0 million payment in connection with the 2009 amendment of the collaboration agreement and made a \$65.0 million commercial milestone payment in the fourth quarter of 2011 related to the commercialization of TELAVIC in Japan. There are no further milestone payments under this collaboration agreement. Mitsubishi Tanabe is responsible for its own development and manufacturing costs in its territory.

Mitsubishi Tanabe may terminate the MTPC Agreement at any time without cause upon 60 days' prior written notice to the Company. The 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 agreement will continue in effect until the expiration of the last-to-expire patent covering TELAVIC. In Japan, the Company has a patent covering the composition-of-matter of TELAVIC that expires in 2021.

Prior to the 2009 amendment to the MTPC Agreement, the Company recognized revenues based on an amortized portion of the 2004 up-front payment, milestones, if any, and reimbursement of certain of the Company's expenses incurred in telaprevir development. The \$105.0 million payment that the Company received in the third quarter of 2009 in connection with the amendment is a nonrefundable, up-front license fee and revenues related to this payment are being recognized on a straight-line basis over the expected period of performance of the Company's obligations under the amended agreement. As of December 31, 2011, there were \$12.7 million in deferred revenues related to this up-front license payment that will be recognized over the remaining period of performance of the Company's obligations under the MTPC Agreement. In connection with the amendment to the MTPC Agreement, the Company agreed to supply manufacturing services to Mitsubishi Tanabe, until April 2012, through the Company's third-party manufacturing network for telaprevir.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

B. Collaborative Arrangements (Continued)

During the three years ended December 31, 2011, the Company recognized the following collaborative revenues attributable to the Mitsubishi Tanabe collaboration:

	<u>2011</u>	<u>2010</u>	<u>2009</u>
	(in thousands)		
Amortized portion of up-front payments	\$ 38,232	\$ 38,232	\$ 16,027
Milestone revenues	68,515	—	—
Reimbursement for telaprevir development costs	—	—	1,265
Payments for manufacturing services	14,928	43,636	1,419
Total collaborative revenues attributable to the Mitsubishi Tanabe collaboration	<u>\$ 121,675</u>	<u>\$ 81,868</u>	<u>\$ 18,711</u>

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 corrector compound discovered under the collaboration, and (ii) additional research and development activities directed at discovering new corrector compounds.

The Company entered into the original collaboration agreement with CFFT in 2004 and amended it several times prior to 2011 to provide partial funding for its cystic fibrosis drug discovery and development efforts. In 2006, the Company received a \$1.5 million milestone payment from CFFT. There are no additional milestones payable by CFFT to the Company pursuant to the collaboration agreement, as amended. 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), VX-809, VX-661 and any other compounds discovered during the course of the research collaboration with CFFT. During the year ended December 31, 2011, the Company recognized \$13.7 million in collaborative revenues pursuant to this collaboration.

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 discovered during the research term that ended in 2008, including KALYDECO, VX-809 and VX-661. The April 2011 Amendment provides for a tiered royalty in the same range on net sales of corrector compounds discovered during the research term that began in 2011. The Company also is obligated to make two one-time commercial milestone payments upon achievement of certain sales levels for a potentiator compound such as KALYDECO and two one-time commercial milestone payments upon achievement of certain sales levels for a corrector compound such as VX-809 or VX-661. KALYDECO was approved by the FDA on January 31, 2012, and the Company filed its MAA with the EMA for ivacaftor in October 2011.

The Company has royalty obligations to CFFT for each compound commercialized pursuant to this collaboration 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 life extensions. CFFT may terminate its funding obligations under the collaboration, as amended, in certain circumstances, in which case there will be a

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

B. Collaborative Arrangements (Continued)

proportional adjustment to the royalty rates and commercial milestone payments for certain corrector compounds. The collaboration also may be terminated by either party for a material breach by the other, subject to notice and cure provisions.

Alios BioPharma, Inc.

License and Collaboration Agreement

On June 13, 2011, the Company entered into a license and collaboration agreement (the "Alios Agreement") with Alios, a privately-held biotechnology company. The Company and Alios are collaborating on the research, development and commercialization of two hepatitis C virus ("HCV") nucleotide analogues discovered by Alios, ALS-2200 and ALS-2158, which are designed to act on the HCV polymerase. As of June 13, 2011, these two HCV nucleotide analogues were being evaluated in nonclinical studies and had not begun Phase 1 clinical development. Alios and the Company began clinical development of these two HCV nucleotide analogues in December 2011. The Company is responsible for all costs related to development and commercialization of the compounds incurred after the effective date of the Alios Agreement, and manufacturing costs for the supply of ALS-2200 and ALS-2158 used after the effective date, and is providing funding to Alios to conduct the Phase 1 clinical trials for ALS-2200 and ALS-2158 and a research program directed to the discovery of additional HCV nucleotide analogues that act on the HCV polymerase.

Under the terms of the Alios Agreement, the Company received exclusive worldwide rights to ALS-2200 and ALS-2158, and has the option to select additional compounds discovered in the research program. The Company paid Alios a \$60.0 million up-front payment, and Alios is eligible to receive research and development milestone payments of up to \$715.0 million if two compounds are approved and commercialized. As of December 31, 2011, Alios had earned \$35.0 million of these research and development milestones. Alios also is eligible to receive commercial milestone payments of up to \$750.0 million, as well as tiered royalties on net sales of approved drugs.

The Company may terminate the Alios Agreement (a) upon 30 days' notice to Alios if the Company ceases development after both ALS-2200 and ALS-2158 have experienced a technical failure and/or (b) upon 60 days' notice to Alios at any time after the Company completes specified Phase 2a clinical trials. The Alios Agreement also may be terminated by either party for a material breach by the other, and by Alios for the Company's inactivity or if the Company challenges certain Alios patents, in each case subject to notice and cure provisions. Unless earlier terminated, the Alios 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.

Alios is continuing to operate as a separate entity, is engaged in other programs directed at developing novel drugs that are not covered by the Alios Agreement, and maintains ownership of the underlying patent rights that are licensed to the Company pursuant to the Alios Agreement. Under applicable accounting guidance, the Company has determined that Alios is a VIE, that Alios is a business and that the Company is Alios' primary beneficiary. The Company based these determinations on, among other factors, the significance to Alios of the two licensed compounds and on the Company's power, through the joint steering committee for the licensed compounds established under the Alios Agreement, to direct the activities that most significantly affect the economic performance of Alios.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

B. Collaborative Arrangements (Continued)

Accordingly, the Company consolidated Alios' statements of operations and financial condition with the Company's consolidated financial statements beginning on June 13, 2011. However, the Company's interests in Alios are limited to those accorded to the Company in the Alios Agreement. In particular, the Company did not acquire any equity interest in Alios, any interest in Alios' cash and cash equivalents or any control over Alios' activities that do not relate to the Alios Agreement. Alios does not have any right to the Company's assets except as provided in the Alios Agreement.

The initial consolidation of a VIE that is determined to be a business is accounted for as a business combination. As a result, as of June 13, 2011 the Company recorded all of Alios' assets and liabilities at fair value on the Company's consolidated balance sheet. The Company continues to consolidate Alios' financial statements, (A) eliminating all intercompany balances and transactions and (B) allocating loss (gain) attributable to the noncontrolling interest in Alios to net loss (gain) attributable to noncontrolling interest (Alios) in the Company's consolidated statement of operations and reflecting noncontrolling interest (Alios) on the Company's consolidated balance sheet.

Consideration for the Alios Collaboration

The consideration from the Company to Alios pursuant to the Alios Agreement consisted of (i) a \$60.0 million up-front payment paid by the Company to Alios, (ii) the estimated fair value on the effective date of the Alios Agreement of the contingent research, development and commercialization milestones potentially payable by the Company to Alios and (iii) the estimated fair value on the effective date of the Alios Agreement of potential royalty payments payable by the Company to Alios. The Company used present-value models to determine the estimated fair value of the potential contingent milestone and royalty payments, based on assumptions regarding the probability of achieving the relevant milestones, estimates regarding the time to develop the drug candidate(s), estimates of future cash flows from potential product sales and assumptions regarding the appropriate discount rates. The Company valued the contingent milestone and royalty payments using (a) discount rates ranging from 3.6% to 6.5% for the research and development milestones and (b) a discount rate of 9.4% for commercial milestones and royalties. The consideration paid and the fair value of the contingent milestone and royalty payments payable by the Company pursuant to the Alios Agreement are set forth in the table below:

	As of <u>June 13, 2011</u> (in thousands)
Up-front payment	\$ 60,000
Fair value of contingent milestone and royalty payments	197,720
Total	\$ 257,720

Allocation of Assets and Liabilities

On June 13, 2011, the Company recorded \$250.6 million of intangible assets on the Company's consolidated balance sheet for Alios' in-process research and development assets. These in-process research and development assets relate to Alios' HCV nucleotide analogue program, including the intellectual property related to ALS-2200 and ALS-2158. The Company used a 9.5% discount rate in the present-value models used to estimate the fair value of the in-process research and development assets. The Company also conducted an evaluation of Alios' other programs and determined that

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

B. Collaborative Arrangements (Continued)

market participants would not have ascribed value to those assets because Alios had not yet identified drug candidates for clinical development, and because of the uncertainties related to (i) identifying compounds suitable for clinical development and (ii) the potential clinical development of these compounds. The difference between the fair value of the consideration and the fair value of Alios' assets, including the fair value of intangible assets and liabilities was allocated to goodwill. This goodwill related to the potential synergies from the possible development of combination therapies involving the acquired drug candidates and telaprevir and/or VX-222. None of the goodwill is expected to be deductible for income tax purposes. The Company completed its valuations of in-process research and development assets and the contingent milestone and royalty payments as of September 30, 2011 and completed its valuation of the deferred tax liability, Alios' net other assets (liabilities) and goodwill in the fourth quarter of 2011. There were no material changes to the preliminary amounts the Company recorded. The following table summarizes the fair values of the assets and liabilities recorded on the effective date of the Alios Collaboration:

	Fair Values as of June 13, 2011
	(in thousands)
Intangible assets	\$ 250,600
Goodwill	4,890
Deferred tax liability	(90,935)
Net other assets	2,230
Net assets attributable to noncontrolling interest (Alios)	<u>\$ 166,785</u>

If the Company is successful in developing an Alios HCV nucleotide analogue, it will amortize as part of cost of product revenues the carrying value of the related in-process research and development asset over the remaining estimated life of the asset, beginning in the period in which the project is completed. If the Company determines that an in-process research and development asset has become impaired or abandons development of the Alios HCV nucleotide analogues, it will write down the carrying value of the related intangible asset to its fair value and will take an impairment charge in the period in which the impairment occurs.

The Company tests Alios' intangible assets and goodwill for impairment on an annual basis as of October 1, and more frequently if indicators are present or changes in circumstance suggest that impairment may exist. In connection with each annual impairment assessment and any interim impairment assessment, the Company will compare the fair value of the asset as of the date of the assessment with the carrying value of the asset on the Company's consolidated balance sheet.

Noncontrolling Interest (Alios)

The Company recorded noncontrolling interest (Alios) on two lines on its consolidated balance sheet beginning as of the effective date of the Alios Agreement. The noncontrolling interest (Alios) is reflected on two separate lines because Alios has both common shareholders and preferred shareholders that are entitled to redemption rights in certain circumstances. The aggregate fair value of the noncontrolling interest on June 13, 2011 was equal to the up-front payment and the fair value of the contingent payments under the Alios Collaboration less the deferred tax liability.

The Company records net income (loss) attributable to noncontrolling interest (Alios) on its consolidated statements of operations, reflecting Alios' net income (loss) for the reporting period,

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

B. Collaborative Arrangements (Continued)

adjusted for changes in fair value of contingent milestone and royalty payments, which are evaluated each reporting period. During 2011, the fair value of contingent milestone and royalties increased by \$70.0 million based on the advancement of ALS-2200 and ALS-2158 into Phase 1 clinical trials, which reduced net income attributable to Vertex. If the Alios HCV nucleotide analogues continue to advance in clinical development, the Company expects it will record increases in the fair value of the contingent milestone and royalty payments.

Activity Related to the Alios Collaboration

A summary of net income attributable to noncontrolling interest (Alios) from June 13, 2011 to December 31, 2011 was as follows:

	June 13, 2011 to December 31, 2011
	(in thousands)
Loss before provision for income taxes	\$ (9,536)
Provision for income taxes	(48,809)
Change in fair value of contingent milestone and royalty payments	69,950
Net income attributable to noncontrolling interest (Alios)	<u>\$ 11,605</u>

Since the effective date of the collaboration, the Company has consolidated all of Alios' expenses and revenues into its consolidated statement of operations, eliminating all intercompany balances and transactions. Pro forma results of operations for 2011, 2010 and 2009, assuming the transaction had taken place at the beginning of each period, would not differ significantly from Vertex's actual reported results.

Alios Balance Sheet Information

The following summarizes items related to Alios included in the Company's consolidated balance sheets as of June 13, 2011 and December 31, 2011:

	As of June 13, 2011	As of December 31, 2011
	(in thousands)	
Restricted cash and cash equivalents (Alios)	\$ 4,575	\$ 51,878
Accounts receivable, net	—	—
Prepaid expenses and other current assets	69	2,299
Property and equipment, net	885	1,925
Intangible assets	250,600	250,600
Goodwill	4,890	4,890
Other assets	76	133
Accounts payable	1,189	4,132
Accrued expenses and other current liabilities	1,504	4,291
Accrued interest	—	13
Income taxes payable (Alios)	—	12,075
Deferred tax liability	90,935	116,121
Other liabilities	682	1,030
Redeemable noncontrolling interest (Alios)	36,299	37,036
Noncontrolling interest (Alios)	130,486	141,633

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

B. Collaborative Arrangements (Continued)

The Company has recorded Alios' cash and cash equivalents as restricted cash and cash equivalents (Alios) because (i) the Company does not have any interest in or control over Alios' cash and cash equivalents and (ii) the Alios Agreement does not provide for these assets to be used for the development of the assets that the Company licensed from Alios pursuant to the collaboration. Assets recorded as a result of consolidating Alios' financial condition into the Company's consolidated balance sheets do not represent additional assets that could be used to satisfy claims against the Company's general assets.

C. Acquisition of ViroChem Pharma Inc.

On March 12, 2009, the Company acquired 100% of the outstanding equity of ViroChem, a privately-held biotechnology company based in Canada, for \$100.0 million in cash and 10,733,527 shares of the Company's common stock. Vertex acquired ViroChem in order to add two clinical-development stage non-nucleoside HCV polymerase inhibitors to Vertex's HCV drug development portfolio. As of December 31, 2011, the Company is continuing development of one of these two non-nucleoside HCV polymerase inhibitors, VX-222. At the time of the acquisition, ViroChem also was engaged in research-stage activities related to viral diseases and was developing an early-stage drug candidate for the treatment of patients with HIV infection.

The Company accounted for the transaction under the acquisition method of accounting. The Company recognized all of the assets acquired and liabilities assumed in the transaction at their acquisition-date fair values and expensed as incurred all transaction costs and restructuring costs associated with the transaction. The intangible assets and goodwill related to the ViroChem acquisition are tested for impairment on an annual basis as of October 1, and more frequently if indicators are present or changes in circumstance suggest that impairment may exist.

The Company consolidated ViroChem's operating results with those of Vertex beginning on the date of the acquisition. ViroChem had no revenues in the period from the acquisition date through December 31, 2009. Pro forma results of operations for the year ended December 31, 2009, assuming the acquisition of ViroChem had taken place at the beginning of 2009, would not differ significantly from Vertex's actual reported results.

The Company allocated the purchase price of \$390.6 million for the acquisition of ViroChem to net tangible assets and intangible assets, goodwill and a deferred tax liability. The difference between the aggregate purchase price and the fair value of assets acquired and liabilities assumed was allocated to goodwill. All of the intangible assets acquired in the ViroChem acquisition related to in-process research and development assets. The in-process research and development assets primarily related to ViroChem's two clinical development-stage non-nucleoside HCV polymerase inhibitors, VX-222 and VX-759. As of December 31, 2011 and 2010, VX-222 accounted for \$412.9 million of the intangible assets reflected on the Company's consolidated balance sheets. No impairment has been found for VX-222 since the acquisition date.

As of December 31, 2010, VX-759 accounted for \$105.8 million of the intangible assets reflected on the Company's consolidated balance sheet. In connection with its preparation of its financial statements for the third quarter of 2011, the Company identified certain factors that were considered impairment indicators related to VX-759. As a result, the Company determined that the value of VX-759, the back-up to VX-222, had become impaired. The Company evaluated VX-759 for impairment in the third quarter of 2011 after receiving (A) information from its ongoing Phase 2a

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

C. Acquisition of ViroChem Pharma Inc. (Continued)

clinical trials of VX-222 including (i) interim data from treatment arms involving the administration of telaprevir, VX-222, pegylated-interferon and ribavirin that suggested the potential to treat patients with genotype 1 HCV infection in as few as 12 weeks and no more than 24 weeks, (ii) in September 2011, final sustained viral response data from these treatment arms and (iii) in the third quarter of 2011, completion of enrollment in the two all-oral treatment arms of this clinical trial, and (B) information regarding potentially competitive drug candidates. Based on the review and consideration of the information regarding the Phase 2a clinical trial, the Company decided to continue developing VX-222, and determined that based on the advancement of VX-222 it was not likely to pursue further development of VX-759. In connection with its impairment evaluation, the Company considered the fair value that would be attributed to VX-759 by a market participant, based on present-value models that were based upon multiple scenarios involving the development and potential commercialization of VX-759, and determined that a market participant would assign a negative fair value to the potential development of VX-759. The Company based this determination on the following: (i) VX-759 was not being evaluated in clinical trials and had only been evaluated in Phase 1 clinical trials in a small number of patients and (ii) drug candidates that would potentially be competitive to VX-759, including VX-222 and drug candidates being developed by the Company's competitors, had been evaluated in Phase 2 clinical trials and therefore, if successful, these drug candidates would reach the market in advance of VX-759. In addition, other drug candidates, including VX-222, continued to have more promising clinical and nonclinical data to support their continued development and commercial potential than the clinical and nonclinical data available for VX-759. Based on this evaluation, the Company determined that the probability of VX-759 reaching the market had decreased significantly and the resulting revenues and market share assumptions included in the Company's present value models also had decreased significantly. Accordingly, the Company determined that the fair value of VX-759 was zero dollars as of September 30, 2011, resulting in a \$105.8 million impairment charge, which was recorded as an operating expense during the three months ended September 30, 2011. In connection with this impairment charge, the Company recorded an adjustment of \$32.7 million to its deferred tax liability.

In addition to the two non-nucleoside HCV polymerase inhibitors, at the time of the acquisition the Company considered ViroChem's other clinical drug candidates and determined that VCH-286, ViroChem's lead HIV drug candidate, had an estimated fair value of \$7.2 million at the acquisition date, based on development costs through the acquisition date. In 2009, the Company determined that the fair value of VCH-286 was zero dollars, resulting in a \$7.2 million impairment charge. In connection with this impairment charge, the Company also recorded an adjustment of \$2.2 million to the deferred tax liability.

The Company's consolidated balance sheets also reflect goodwill that relates to the potential synergies from the possible development of combination therapies involving telaprevir and the acquired drug candidates. No impairment has been found for goodwill since the acquisition date. None of the goodwill is expected to be deductible for income tax purposes.

The deferred tax liability related to ViroChem of \$127.6 million and \$160.3 million, respectively, recorded as of December 31, 2011 and 2010 primarily relates to the tax impact of future amortization or impairments associated with the identified intangible assets acquired from ViroChem, which are not deductible for tax purposes.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

C. Acquisition of ViroChem Pharma Inc. (Continued)

Acquisition-related Expenses, Including Restructuring

In connection with the acquisition of ViroChem, the Company incurred \$7.8 million in expenses, which are reflected as acquisition-related expenses on the consolidated statement of operations for 2009. These costs include transaction expenses as well as a restructuring charge the Company incurred in March 2009 when it determined it would restructure ViroChem's operations in order to focus on ViroChem's HCV programs. As a result of this restructuring plan, which was completed in the second quarter of 2009, Vertex recorded a \$2.1 million expense due to employee severance, benefits and related costs in 2009.

D. Earnings Per Share

Basic net loss attributable to Vertex per common share is based upon the weighted-average number of common shares outstanding during the period, excluding restricted stock that has been issued but is not yet vested. Diluted net loss attributable to Vertex per common share 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.

Basic and diluted net income attributable to Vertex per common share are presented in conformity with the two-class method required for participating securities. Under the two-class method, earnings are allocated to (i) Vertex common shares, excluding shares of restricted stock that have been issued but have not yet vested, and (ii) participating securities, based on their respective weighted-average shares outstanding for the period. The shares of unvested restricted stock have the non-forfeitable right to receive dividends on an equal basis with other outstanding common stock. As a result, these unvested shares of restricted stock are considered participating securities that must be included in the calculation of basic and diluted net income attributable to Vertex per common share using the two-class method. Potentially dilutive shares result from the assumed exercise of outstanding stock options (the

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

D. Earnings Per Share (Continued)

proceeds of which are then assumed to have been used to repurchase outstanding stock using the treasury stock method) and the assumed conversion of convertible notes.

	Year Ended December 31,		
	2011	2010	2009
	(in thousands)		
<i>Basic net income (loss) attributable to Vertex per common share calculation:</i>			
Net income (loss) attributable to Vertex common shareholders	\$ 29,574	\$ (754,626)	\$ (642,178)
Less: Undistributed earnings allocated to participating securities	(291)	—	—
Net income (loss) attributable to Vertex common shareholders—basic	\$ 29,283	\$ (754,626)	\$ (642,178)
Basic weighted-average common shares outstanding	204,891	200,402	173,259
Basic net income (loss) attributable to Vertex per common share	\$ 0.14	\$ (3.77)	\$ (3.71)
<i>Diluted net income (loss) attributable to Vertex per common share calculation:</i>			
Net income (loss) attributable to Vertex common shareholders	\$ 29,574	\$ (754,626)	\$ (642,178)
Less: Undistributed earnings allocated to participating securities	(285)	—	—
Net income (loss) attributable to Vertex common shareholders—diluted	\$ 29,289	\$ (754,626)	\$ (642,178)
Weighted-average shares used to compute basic net income (loss) per common share	204,891	200,402	173,259
Effect of potentially dilutive securities:			
Stock options	3,863	—	—
Other	53	—	—
Weighted average shares used to compute diluted net income (loss) per common share	208,807	200,402	173,259
Diluted net income (loss) attributable to Vertex per common share	\$ 0.14	\$ (3.77)	\$ (3.71)

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

	Year Ended December 31,		
	2011	2010	2009
	(in thousands)		
Stock options	9,626	21,293	19,232
Convertible senior subordinated notes	8,192	8,192	1,386
Unvested restricted stock and restricted stock units	8	1,950	1,727

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Notes to Consolidated Financial Statements (Continued)

E. Fair Value of Financial Instruments

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

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

The Company's investment strategy is focused on capital preservation. The Company invests in instruments that meet the credit quality standards outlined in the Company's investment policy. This policy also limits the amount of credit exposure to any one issue or type of instrument. As of December 31, 2011, the Company's investments were in money market funds, short-term U.S. Treasury securities and short-term government-sponsored enterprise securities.

As of December 31, 2011, all of the Company's financial assets that were subject to fair value measurements were valued using observable inputs. The Company's financial assets that were valued based on Level 1 inputs consist of a money market fund, U.S. Treasury securities and government-sponsored enterprise securities. The Company's money market fund also invests in government-sponsored enterprise securities. During 2011, 2010 and 2009, the Company did not record an other-than-temporary impairment charge related to its financial assets. During the third quarter of 2011, the Company evaluated VX-759 for impairment using Level 3 inputs. Please refer to Note C, "Acquisition of ViroChem Pharma Inc." for further information. The Company's financial liabilities that were subject to fair value measurement related to the financial transactions that the Company entered into in September 2009 and were valued based on Level 3 inputs. Please refer to Note N, "September 2009 Financial Transactions," for further information. The Company's noncontrolling interest (Alios) includes the fair value of the contingent milestone and royalty payments, which is valued based on Level 3 inputs. Please refer to Note B, "Collaborative Arrangements," for further information.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

E. Fair Value of Financial Instruments (Continued)

The following table sets forth the Company's financial assets (excluding Alios' cash equivalents) subject to fair value measurements as of December 31, 2011:

	Fair Value Measurements as of December 31, 2011			
	Total	Fair Value Hierarchy		
		Level 1	Level 2	Level 3
(in thousands)				
Financial assets carried at fair value:				
Cash equivalents:				
Money market funds	\$ 222,225	\$ 222,225	\$ —	\$ —
Government-sponsored enterprise securities	113,285	113,285	—	—
Marketable securities:				
U.S. Treasury securities	22,107	22,107	—	—
Government-sponsored enterprise securities	471,495	471,495	—	—
Restricted cash	34,090	34,090	—	—
Total	\$ 863,202	\$ 863,202	\$ —	\$ —

Alios' cash equivalents of \$49.0 million as of December 31, 2011 consist of money market funds, which are valued based on Level 1 inputs.

The following table is a reconciliation of financial liabilities measured at fair value using significant unobservable inputs (Level 3):

	Year Ended December 31, 2011 (in thousands)
Balance, December 31, 2010	\$ 89,888
Change in fair value of derivative instruments	16,801
Redemption of the 2012 Notes and settlement of the liability related to the sale of milestone rights	(106,689)
Balance, December 31, 2011	\$ —

As of December 31, 2011, the Company had \$400.0 million in aggregate principal amount of 3.35% convertible senior subordinated notes due 2015 (the "2015 Notes") on its consolidated balance sheet. At December 31, 2011, these 2015 Notes had a fair value of approximately \$414 million as obtained from a quoted market source.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

F. Marketable Securities

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

	<u>Amortized Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Losses</u>	<u>Fair Value</u>
	(in thousands)			
December 31, 2011				
Cash and cash equivalents:				
Cash and money market funds	\$ 362,035	\$ —	\$ —	\$ 362,035
Government-sponsored enterprise securities	113,302	—	(17)	113,285
Total cash and cash equivalents	\$ 475,337	\$ —	\$ (17)	\$ 475,320
Marketable securities:				
U.S. Treasury securities (due within 1 year)	\$ 22,105	\$ 2	\$ —	\$ 22,107
Government-sponsored enterprise securities (due within 1 year)	471,589	8	(102)	471,495
Total marketable securities	\$ 493,694	\$ 10	\$ (102)	\$ 493,602
Total cash, cash equivalents and marketable securities	\$ 969,031	\$ 10	\$ (119)	\$ 968,922
December 31, 2010				
Cash and cash equivalents:				
Cash and money market funds	\$ 193,845	\$ —	\$ —	\$ 193,845
U.S. Treasury securities	4,770	—	—	4,770
Government-sponsored enterprise securities	44,587	1	(6)	44,582
Total cash and cash equivalents	\$ 243,202	\$ 1	\$ (6)	\$ 243,197
Marketable securities:				
U.S. Treasury securities (due within 1 year)	\$ 103,230	\$ 1	\$ (11)	\$ 103,220
Government-sponsored enterprise securities (due within 1 year)	684,969	87	(62)	684,994
Total marketable securities	\$ 788,199	\$ 88	\$ (73)	\$ 788,214
Total cash, cash equivalents and marketable securities	\$ 1,031,401	\$ 89	\$ (79)	\$ 1,031,411

Alios' \$51.9 million of cash and money market funds as of December 31, 2011, recorded on the Company's consolidated balance sheet in "Restricted cash and cash equivalents (Alios)," are not included in the above table.

G. Inventories

As of December 31, 2011, all of the Company's inventories related to INCIVEK. The following table sets forth the Company's inventories:

	<u>At December 31,</u>	
	<u>2011</u>	<u>2010</u>
	(in thousands)	
Raw materials	\$ 32,213	\$ —
Work in process	47,010	—
Finished goods	33,207	—
Total	\$ 112,430	\$ —

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

G. Inventories (Continued)

On January 1, 2011, the Company began capitalizing inventory costs for INCIVEK manufactured in preparation for the product launch in the United States based on its evaluation of, among other factors, information regarding INCIVEK's safety and efficacy and the status of the INCIVEK new drug application. The FDA approved INCIVEK on May 23, 2011. In periods prior to January 1, 2011, the Company expensed costs associated with INCIVEK raw materials, work in process and finished goods as development expenses. As of December 31, 2011, the Company has not capitalized inventory costs related to its other drug development programs. The Company expects to begin capitalizing KALYDECO inventories as of January 1, 2012.

H. Property and Equipment

Property and equipment, net consisted of the following:

	At December 31,	
	2011	2010
	(in thousands)	
Furniture and equipment	\$ 151,961	\$ 137,904
Leasehold improvements	107,169	102,720
Software	56,923	50,211
Computers	33,116	28,817
Construction-in-progress	55,070	—
Total property and equipment, gross	404,239	319,652
Less accumulated depreciation and amortization	271,063	247,319
Total property and equipment, net	\$ 133,176	\$ 72,333

Construction-in-progress as of December 31, 2011 included \$54.7 million related to construction costs incurred by the landlord at Fan Pier in Boston, Massachusetts. Please refer to Note I, "Fan Pier Leases," for further information.

Depreciation and amortization expense for the years ended December 31, 2011, 2010 and 2009 was \$28.9 million, \$27.9 million and \$28.3 million, respectively.

In 2011, 2010 and 2009, the Company wrote off certain assets that were fully depreciated and no longer utilized. There was no effect on the Company's net property and equipment. Additionally, the Company wrote off or sold certain assets that were not fully depreciated. The loss on disposal of those assets was \$55,000 in 2011, \$39,000 in 2010 and \$2.2 million in 2009.

I. Fan Pier Leases

On May 5, 2011, the Company entered into two leases, pursuant to which the Company agreed to lease approximately 1.1 million square feet of office and laboratory space in two buildings to be built at Fan Pier in Boston, Massachusetts (the "Fan Pier Leases"). The Fan Pier Leases will commence upon completion of the buildings (the "Buildings"), scheduled for late 2013, and will extend for 15 years from the commencement date. The Company has an option to extend the term of the Fan Pier Leases for an additional ten years.

Because the Company is involved in the construction project, including having responsibility to pay for a portion of the costs of tenant improvements and structural elements of the Buildings, the

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

I. Fan Pier Leases (Continued)

Company is deemed for accounting purposes to be the owner of the Buildings during the construction period. Accordingly, the Company has recorded, as of December 31, 2011, \$54.7 million of project construction costs incurred by the landlord as an asset and a corresponding financing obligation in "Property and equipment, net" and "Construction financing obligation," respectively, on the Company's consolidated balance sheet.

The Company bifurcates its future 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 are being built. Although the Company will not begin making lease payments pursuant to the Fan Pier Leases until the Company occupies the Buildings, the portion of the lease obligations allocated to the land is treated for accounting purposes as an operating lease that commenced in the second quarter of 2011. The Company recorded \$3.9 million in expense related to this operating lease during 2011.

Once the construction of the Buildings is completed, the Company will evaluate the Fan Pier Leases in order to determine whether or not the leases meet the criteria for "sale-leaseback" treatment. The Company expects that upon completion of construction of the Buildings the Fan Pier Leases will not meet the "sale-leaseback" criteria. If the Fan Pier Leases do not meet "sale-leaseback" criteria, the Company will treat the Buildings as a financing obligation and the asset will be depreciated over its estimated useful life. If the Fan Pier Leases meet the "sale-leaseback" criteria, the Company will remove the asset and the related liability from its consolidated balance sheet and treat the Fan Pier Leases as either operating or capital leases based on the Company's assessment of the accounting guidance.

J. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following:

	<u>At December 31,</u>	
	<u>2011</u>	<u>2010</u>
	(in thousands)	
Research and development contract costs	\$ 66,426	\$ 55,506
Payroll and benefits	57,453	50,041
Product revenue allowances	58,201	—
Royalty payable	28,603	2,869
State income taxes	3,691	—
Unrecognized tax benefits	4,360	2,374
Professional fees	12,785	8,629
Other	20,780	14,995
Total	<u>\$ 252,299</u>	<u>\$ 134,414</u>

K. Common Stock Offerings and Convertible Senior Subordinated Notes

Common Stock Offerings

In December 2009, the Company completed an offering of 13,000,000 shares of common stock, which were sold at a price of \$38.50 per share. This offering resulted in \$488.1 million of net proceeds

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

K. Common Stock Offerings and Convertible Senior Subordinated Notes (Continued)

to the Company. The underwriting discount of \$12.1 million and other expenses of \$0.3 million were recorded as an offset to additional paid-in capital.

In February 2009, the Company completed an offering of 10,000,000 shares of common stock, which were sold at a price of \$32.00 per share. This offering resulted in \$313.3 million of net proceeds to the Company. The underwriting discount of \$6.4 million and other expenses of \$0.3 million were recorded as an offset to additional paid-in capital.

Convertible Senior Subordinated Notes

Convertible Senior Subordinated Notes (due 2015)

In September 2010, the Company completed an offering of \$400.0 million in aggregate principal amount of 2015 Notes. This offering resulted in \$391.6 million of net proceeds to the Company. The underwriting discount of \$8.0 million and other expenses of \$0.4 million were recorded as debt issuance costs and are included in other assets on the Company's consolidated balance sheets. The 2015 Notes were issued pursuant to and are governed by the terms of an indenture (as supplemented, the "Indenture").

The 2015 Notes are convertible at any time, at the option of the holder, into common stock at a price equal to approximately \$48.83 per share, or 20.4794 shares of common stock per \$1,000 principal amount of the 2015 Notes, subject to adjustment. The 2015 Notes bear interest at the rate of 3.35% per annum, and the Company is required to make semi-annual interest payments on the outstanding principal balance of the 2015 Notes on April 1 and October 1 of each year. The 2015 Notes mature on October 1, 2015.

Prior to October 1, 2013, if the closing price of the Company's common stock has exceeded 130% of the then applicable conversion price for at least 20 trading days within a period of 30 consecutive trading days, the Company may redeem the 2015 Notes at its option, in whole or in part, at a redemption price equal to 100% of the principal amount of the 2015 Notes to be redeemed. If the Company elects to redeem the 2015 Notes prior to October 1, 2013, or the holder elects to convert the 2015 Notes after receiving notice of such redemption, the Company will be obligated to make an additional payment, payable in cash or, subject to certain conditions, shares of the Company's common stock, so that the Company's total interest payments on the 2015 Notes being redeemed and such additional payment shall equal three years of interest. On or after October 1, 2013, the Company may redeem the 2015 Notes at its option, in whole or in part, at the redemption prices stated in the Indenture plus accrued and unpaid interest, if any, to, but excluding, the redemption date.

Holder may require the Company to repurchase some or all of their 2015 Notes upon the occurrence of certain fundamental changes of Vertex, as set forth in the Indenture, at 100% of the principal amount of the 2015 Notes to be repurchased, plus any accrued and unpaid interest, if any, to, but excluding, the repurchase date.

If a fundamental change occurs that is also a specific type of change of control under the Indenture, the Company will pay a make-whole premium upon the conversion of the 2015 Notes in connection with any such transaction by increasing the applicable conversion rate on such 2015 Notes. The make-whole premium will be in addition to, and not in substitution for, any cash, securities or other assets otherwise due to holders of the 2015 Notes upon conversion. The make-whole premium will be determined by reference to the Indenture and is based on the date on which the fundamental

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

K. Common Stock Offerings and Convertible Senior Subordinated Notes (Continued)

change becomes effective and the price paid, or deemed to be paid, per share of the Company's common stock in the transaction constituting the fundamental change, subject to adjustment.

Based on the Company's evaluation of the 2015 Notes, the Company determined that the 2015 Notes contain a single embedded derivative. This embedded derivative relates to potential penalty interest payments that could be imposed on the Company for a failure to comply with its securities reporting obligations pursuant to the 2015 Notes. This embedded derivative required bifurcation because it was not clearly and closely related to the host instrument. The Company has determined that the value of this embedded derivative was nominal as of September 28, 2010, the issue date of the 2015 Notes, December 31, 2010, and December 31, 2011.

Convertible Senior Subordinated Notes (due 2013)

On January 1, 2009, the Company had outstanding \$287.5 million in aggregate principal amount of 4.75% convertible senior subordinated notes due 2013 (the "2013 Notes"). The 2013 Notes were convertible, at the option of the holder, into common stock at a price equal to \$23.14 per share or 43.22 shares of common stock per \$1,000 in principal amount of the 2013 Notes. The 2013 Notes bore interest at the rate of 4.75% per annum, and the Company was required to make semi-annual interest payments on the outstanding principal balance of the 2013 Notes on February 15 and August 15 of each year. The Company had the right to redeem the 2013 Notes, in whole or in part, on or after February 15, 2010, at the redemption prices stated in the indenture, plus accrued and unpaid interest to, but excluding, the redemption date. The 2013 Notes would have matured on February 15, 2013.

In 2009, the Company exchanged \$255.4 million in aggregate principal amount of the 2013 Notes, plus accrued interest, for 11,581,838 shares of newly-issued common stock. As a result of these exchanges, the Company incurred non-cash charges of \$18.1 million related to the incremental shares that were issued to induce the holders of the 2013 Notes to enter into these exchanges. In addition, accrued interest of \$3.4 million and unamortized debt issuance costs of the 2013 Notes of \$5.9 million were recorded as an offset to additional paid-in capital.

In the first quarter of 2010, the Company announced that it would redeem the remaining \$32.1 million in aggregate principal amount of the 2013 Notes on March 19, 2010. Instead, the holders of the remaining 2013 Notes elected to convert their 2013 Notes, pursuant to the original terms of the 2013 Notes, into 1,386,006 shares of newly-issued common stock in full satisfaction of the 2013 Notes. Accrued interest of \$0.1 million and unamortized debt issuance costs of the 2013 Notes of \$0.6 million were recorded as an offset to additional paid-in capital.

L. Preferred Stock, Common Stock and Equity Plans

The Company is authorized to issue 1,000,000 shares of preferred stock in one or more series and to fix the powers, designations, preferences and relative participating, option or other rights thereof, including dividend rights, conversion rights, voting rights, redemption terms, liquidation preferences and the number of shares constituting any series, without any further vote or action by the Company's shareholders. As of December 31, 2011 and 2010, the Company had no shares of preferred stock issued or outstanding.

The Company is authorized to issue 300,000,000 shares of common stock. Holders of common stock are entitled to one vote per share. Holders of common stock are entitled to receive dividends, if

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

L. Preferred Stock, Common Stock and Equity Plans (Continued)

and when declared by the Company's Board of Directors, and to share ratably in the Company's assets legally available for distribution to the Company's shareholders in the event of liquidation. Holders of common stock have no preemptive, subscription, redemption or conversion rights. The holders of common stock do not have cumulative voting rights.

Stock and Option Plans

The purpose of each of the Company's stock and option plans is to attract, retain and motivate its employees, consultants and directors. Awards granted under these plans can be incentive stock options ("ISOs"), nonstatutory stock options ("NSOs"), restricted stock ("RSs"), restricted stock units ("RSUs") or other equity-based awards, as specified in the individual plans.

Shares issued under all of the Company's plans are funded through the issuance of new shares. The following table contains information about the Company's equity plans:

Title of Plan	Group Eligible	Type of Award Granted	As of December 31, 2011	
			Awards Outstanding	Additional Awards Authorized for Grant
2006 Stock and Option Plan	Employees, Non-employee Directors and Consultants	NSO, ISO, RS and RSU	19,889,776	8,631,417
1996 Stock and Option Plan	Employees, Non-employee Directors, Advisors and Consultants	NSO, ISO and RS	3,177,457	—
Total			23,067,233	8,631,417

All options granted under the Company's 2006 Stock and Option Plan ("2006 Plan") and 1996 Stock and Option Plan were granted with an exercise price equal to the fair value of the underlying common stock on the date of grant. As of December 31, 2011, the only stock and option plan under which the Company makes new equity awards is the Company's 2006 Plan. Under the 2006 Plan, no stock options can be awarded with an exercise price less than the fair market value on the date of grant. The Company's shareholders approved increases in the number of shares authorized for issuance pursuant to the 2006 Plan of 12,000,000 shares and 7,700,000 shares, respectively, in 2010 and 2009.

During the three years ended December 31, 2011, grants to current employees and directors had a grant date that was the same as the date the award was approved by the Company's Board of Directors. During the three years ended December 31, 2011, for grants to new employees and directors, the date of grant for awards was the employee's first day of employment or the date the director was elected to the Company's Board of Directors. All options awarded under the Company's stock and option plans expire not more than ten years from the grant date.

During the three years ended December 31, 2011, all shares of outstanding restricted stock and restricted stock units have been granted at price equal to \$0.01, the par value of the Company's common stock. Vesting of options, restricted stock and restricted stock units generally is ratable over specified periods, usually four years, and is determined by the Company's Board of Directors.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

L. Preferred Stock, Common Stock and Equity Plans (Continued)

The following table summarizes information related to the outstanding and vested options during the year ended December 31, 2011:

	<u>Stock Options</u> (in thousands)	<u>Weighted-average Exercise Price</u> (per share)	<u>Weighted-average Remaining Contractual Life</u> (in years)	<u>Aggregate Intrinsic Value</u> (in thousands)
Outstanding at December 31, 2010	21,293	\$ 30.50		
Granted	5,754	43.55		
Exercised	(4,119)	26.60		
Forfeited	(1,554)	36.78		
Expired	(451)	37.81		
Outstanding at December 31, 2011	20,923	\$ 34.23	6.84	\$ 56,376
Exercisable at December 31, 2011	12,225	\$ 30.59	5.55	\$ 53,552
Total exercisable or expected to vest at December 31, 2011	19,922	\$ 33.94	6.74	\$ 56,108

The aggregate intrinsic value in the table above represents the total pre-tax amount, net of exercise price, which would have been received by option holders if all option holders had exercised all options with an exercise price lower than the market price on December 30, 2011 (the last trading day of 2011), which was \$32.92 based on the average of the high and low price of the Company's common stock on that date.

The total intrinsic value (the amount by which the fair market value exceeded the exercise price) of stock options exercised during 2011, 2010 and 2009 was \$90.5 million, \$10.5 million and \$36.4 million, respectively. The total cash received from employees as a result of employee stock option exercises during 2011, 2010 and 2009 was \$109.6 million, \$22.2 million and \$38.2 million, respectively.

The following table summarizes information about stock options outstanding and exercisable at December 31, 2011:

<u>Range of Exercise Prices</u>	<u>Options Outstanding</u>			<u>Options Exercisable</u>	
	<u>Number Outstanding</u> (in thousands)	<u>Weighted- average Remaining Contractual Life</u>	<u>Weighted- average Exercise Price</u>	<u>Number Exercisable</u> (in thousands)	<u>Weighted- average Exercise Price</u>
		(in years)	(per share)		(per share)
\$ 9.07–\$20.00	2,751	2.99	\$ 15.52	2,689	\$ 15.44
\$20.01–\$30.00	1,902	6.71	\$ 28.89	1,363	\$ 28.61
\$30.01–\$40.00	13,790	7.16	\$ 35.70	7,804	\$ 35.17
\$40.01–\$50.00	403	9.04	\$ 44.53	69	\$ 44.54
\$50.01–\$57.27	2,077	9.47	\$ 52.17	300	\$ 53.12

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

L. Preferred Stock, Common Stock and Equity Plans (Continued)

The following table summarizes the restricted stock activity of the Company during the year ended December 31, 2011:

	<u>Restricted Stock</u> (in thousands)	<u>Weighted-average Grant-date Fair Value</u> (per share)
Unvested at December 31, 2010	1,931	\$ 33.35
Granted	1,185	41.04
Vested	(747)	33.97
Cancelled	(269)	36.01
Unvested at December 31, 2011	<u>2,100</u>	<u>\$ 37.13</u>

The total fair value of the restricted stock vesting during 2011, 2010 and 2009 (measured on the date of vesting) was \$34.6 million, \$20.1 million and \$26.5 million, respectively.

Employee Stock Purchase Plan

The Company has an employee stock purchase plan (the "ESPP"). The ESPP permits eligible employees to enroll in a twelve-month offering period comprising two six-month purchase periods. Participants may purchase shares of the Company's common stock, through payroll deductions, at a price equal to 85% of the fair market value of the common stock on the first day of the applicable twelve-month offering period, or the last day of the applicable six-month purchase period, whichever is lower. Purchase dates under the ESPP occur on or about May 14 and November 14 of each year. As of December 31, 2011, there were 482,000 shares of common stock authorized for issuance pursuant to the ESPP.

During the year ended December 31, 2011, the following shares were issued to employees under the ESPP:

	<u>Year Ended December 31, 2011</u> (in thousands, except per share amount)
Number of shares	557
Average price paid per share	\$ 27.47

M. Stock-based Compensation Expense

The Company recognizes share-based payments to employees as compensation expense using the fair value method. The fair value of stock options and shares purchased pursuant to the ESPP is calculated using the Black-Scholes option pricing model. The fair value of restricted stock and restricted stock units typically is based on the intrinsic value on the date of grant. Stock-based compensation, measured at the grant date based on the fair value of the award, is typically recognized as expense ratably over the service period. The expense recognized over the service period includes an estimate of awards that will be forfeited.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

M. Stock-based Compensation Expense (Continued)

The effect of stock-based compensation expense during the three years ended December 31, 2011 was as follows:

	<u>2011</u>	<u>2010</u>	<u>2009</u>
	(in thousands)		
Stock-based compensation expense by line item:			
Research and development expenses	\$ 75,574	\$ 65,198	\$ 64,128
Sales, general and administrative expenses	42,652	25,926	22,594
Total stock-based compensation expense included in costs and expenses	<u>\$ 118,226</u>	<u>\$ 91,124</u>	<u>\$ 86,722</u>

During 2011, the Company capitalized \$1.0 million of stock-based compensation expense to inventories, all of which was attributable to employees who supported the Company's manufacturing operations related to INCIVEK.

The stock-based compensation expense by type of award during the three years ended December 31, 2011 was as follows:

	<u>2011</u>	<u>2010</u>	<u>2009</u>
	(in thousands)		
Stock-based compensation expense by type of award:			
Stock options	\$ 83,098	\$ 64,005	\$ 63,397
Restricted stock and restricted stock units	30,708	22,960	18,983
ESPP share issuances	5,462	4,159	4,342
Less stock-based compensation expense capitalized to inventories	(1,042)	—	—
Total stock-based compensation expense included in costs and expenses	<u>\$ 118,226</u>	<u>\$ 91,124</u>	<u>\$ 86,722</u>

The stock-based compensation expense related to stock options for 2009 included \$12.7 million related to stock options that were accelerated and modified in connection with transition and severance arrangements with certain of the Company's former executive officers. The stock-based compensation expense related to restricted stock for 2009 included \$2.2 million related to accelerated vesting of restricted stock awards in connection with transition and severance arrangements with certain of the Company's former executive officers.

The following table sets forth the Company's unrecognized stock-based compensation expense, net of estimated forfeitures, as of December 31, 2011 by type of award and the weighted-average period over which that expense is expected to be recognized:

	<u>As of December 31, 2011</u>	
	<u>Unrecognized Expense Net of Estimated Forfeitures</u>	<u>Weighted-average Recognition Period</u>
	(in thousands)	(in years)
Type of award:		
Stock options	\$ 139,165	2.73
Restricted stock and restricted stock units	44,744	2.25
ESPP share issuances	5,128	0.65

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Notes to Consolidated Financial Statements (Continued)

M. Stock-based Compensation Expense (Continued)

Stock Options

The Company issues stock options with service conditions, which are generally the vesting periods of the awards. In 2009, the Company also issued, to certain members of senior management, stock options that vest upon the earlier of the satisfaction of (1) performance conditions or (2) a service condition. If the Company estimates that it is probable that a performance condition will be met over a period shorter than the vesting period, the Company recognizes stock-based compensation expense related to the shares that would vest upon the performance condition over an implicit service period equal to the period that the Company estimates will be required to meet the performance condition. The Company uses the Black-Scholes option pricing model to estimate the fair value of stock options at the grant date. The Black-Scholes option pricing model uses the option exercise price as well as estimates and assumptions related to the expected price volatility of the Company's stock, the rate of return on risk-free investments, the expected period during which the options will be outstanding, and the expected dividend yield for the Company's stock to estimate the fair value of a stock option on the grant date. The options granted during 2011, 2010 and 2009 had a weighted-average grant-date fair value per share of \$20.88, \$18.52 and \$19.11, respectively.

The fair value of each option granted during 2011, 2010 and 2009 was estimated on the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

	2011	2010	2009
Expected stock price volatility	49.53%	52.17%	57.77%
Risk-free interest rate	2.09%	2.44%	2.85%
Expected term of options	5.74 years	5.71 years	6.31 years
Expected annual dividends	—	—	—

The weighted-average valuation assumptions were determined as follows:

- *Expected stock price volatility:* Options to purchase the Company's stock with remaining terms of greater than one year are regularly traded in the market. Expected stock price volatility is calculated using the trailing one month average of daily implied volatilities prior to grant date.
- *Risk-free interest rate:* The Company bases the risk-free interest rate on the interest rate payable on U.S. Treasury securities in effect at the time of grant for a period that is commensurate with the assumed expected option term.
- *Expected term of options:* The expected term of options represents the period of time options are expected to be outstanding. The Company uses historical data to estimate employee exercise and post-vest termination behavior. The Company believes that all groups of employees exhibit similar exercise and post-vest termination behavior and therefore does not stratify employees into multiple groups in determining the expected term of options.
- *Expected annual dividends:* The estimate for annual dividends is \$0.00 because the Company has not historically paid, and does not intend for the foreseeable future to pay, a dividend.

Restricted Stock and Restricted Stock Units

The Company issues restricted stock and restricted stock units with service conditions, which are generally the vesting periods of the awards. The Company also issues, to certain members of senior

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

M. Stock-based Compensation Expense (Continued)

management, restricted stock and restricted stock units that vest upon the earlier of the satisfaction of (i) a market or performance condition or (ii) a service condition.

Employee Stock Purchase Plan

The weighted-average fair value of each purchase right granted during 2011, 2010 and 2009 was \$9.80, \$10.19 and \$11.31, respectively. The following table reflects the weighted-average assumptions used in the Black-Scholes option pricing model for 2011, 2010 and 2009:

	2011	2010	2009
Expected stock price volatility	51.32%	43.92%	54.22%
Risk-free interest rate	0.08%	0.24%	0.39%
Expected term	0.72 years	0.71 years	0.76 years
Expected annual dividends	—	—	—

The expected stock price volatility for ESPP offerings is based on implied volatility. The Company bases the risk-free interest rate on the interest rate payable on U.S. Treasury securities in effect at the time of grant for a period that is commensurate with the assumed expected term. The expected term represents purchases and purchase periods that take place within the offering period. The expected annual dividends estimate is \$0.00 because the Company has not historically paid, and does not for the foreseeable future intend to pay, a dividend.

N. September 2009 Financial Transactions

2012 Notes

In September 2009, the Company sold \$155.0 million in aggregate of secured notes due 2012 (the "2012 Notes") for an aggregate of \$122.2 million pursuant to a note purchase agreement with Olmsted Park S.A. (the "Purchaser"). The 2012 Notes were issued pursuant to, and the 2012 Notes were governed by the terms of, an indenture entered into on September 30, 2009 between the Company and U.S. Bank National Association, as trustee and collateral agent. In connection with the issuance of the 2012 Notes, the Company granted a security interest to the Purchaser with respect to \$155.0 million of telaprevir milestone payments that the Company was eligible to earn from Janssen for the filing, approval and launch of telaprevir in the European Union.

The 2012 Notes were issued at a discount and did not pay current interest prior to maturity. The 2012 Notes were scheduled to mature on October 31, 2012, subject to earlier mandatory redemption to the extent that specified milestone events set forth in the Company's collaboration with Janssen occurred prior to October 31, 2012. In February 2011, the Company received a milestone payment of \$50.0 million and subsequently redeemed \$50.0 million of 2012 Notes pursuant to their terms. The remaining \$105.0 million of 2012 Notes were redeemed on October 31, 2011, with the proceeds of milestone payments received from Janssen in October 2011.

The 2012 Notes contained an embedded derivative related to the potential mandatory redemption or early repayment of the 2012 Notes at the face amount prior to their maturity date. The Company bifurcated the embedded derivative from the 2012 Notes because the features of the embedded derivative were not clearly and closely related to the 2012 Notes. The Company determined the fair value of the embedded derivative based on a probability-weighted model of the discounted value that market participants would ascribe to the potential mandatory redemption and early repayment features

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Notes to Consolidated Financial Statements (Continued)

N. September 2009 Financial Transactions (Continued)

of the outstanding 2012 Notes. The fair value of this embedded derivative was evaluated quarterly, with any changes in the fair value of the embedded derivative resulting in a corresponding loss or gain. The Company recorded quarterly interest expense related to the 2012 Notes using the effective interest rate method. The liabilities related to the 2012 Notes, including the embedded derivative, were reflected together on the Company's consolidated balance sheet as of December 31, 2010.

Sale of Contingent Milestone Payments

On September 30, 2009, the Company entered into two purchase agreements with the Purchaser pursuant to which the Company sold its rights to an aggregate of \$95.0 million in contingent milestone payments under the Janssen agreement related to the launch of telaprevir in the European Union, for nonrefundable payments totaling \$32.8 million. The purchase agreements contained representations, warranties, covenants and indemnification obligations of each party. The Purchaser received the \$95.0 million in milestone payments from Janssen in October 2011.

The Company determined that this sale of a future revenue stream should be accounted for as a liability because the Company had significant continuing involvement in the generation of the milestone payments pursuant to its collaboration agreement with Janssen. As a result, the Company recorded a liability on its consolidated balance sheet equal to the fair value of the purchase agreements. No revenues or deferred revenues were recorded on account of the amounts that the Company received from the Purchaser pursuant to these purchase agreements. In addition, the Company determined that the purchase agreements were free-standing derivative instruments. The aggregate fair value of the free-standing derivatives created by the sale of the rights to contingent milestone payments to the Purchaser pursuant to the purchase agreements was based on a probability-weighted model of the discounted value that market participants would ascribe to these rights. The models used to estimate the fair value of the rights sold to the Purchaser pursuant to the purchase agreements required the Company to make estimates regarding, among other things, the assumptions market participants would make regarding the timing and probability of achieving the milestones and the appropriate discount rates. The fair value of the rights sold to the Purchaser pursuant to the purchase agreements was evaluated each reporting period, with any changes in the fair value of the derivative instruments based on the probability of achieving the milestones, the timing of achieving the milestones or discount rates resulting in a corresponding gain or loss. Because the Company's estimates of the fair value of the rights to the contingent milestone payments included the application of a discount rate to reflect the time-value of money, the Company recorded costs related to this liability each quarter.

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Notes to Consolidated Financial Statements (Continued)

N. September 2009 Financial Transactions (Continued)

Expenses and Liabilities Related to September 2009 Financial Transactions

The tables below set forth the total expenses related to the September 2009 financial transactions for 2011, 2010 and 2009, and the liabilities reflected on the Company's consolidated balance sheets related to these transactions as of December 31, 2011 and 2010.

	Year Ended December 31,		
	2011	2010	2009
	(in thousands)		
Expenses and Losses (Gains):			
Interest expense related to 2012 Notes	\$ 21,687	\$ 15,068	\$ 3,465
Change in fair value of embedded derivative related to 2012 Notes	(400)	1,637	(200)
Change in fair value of free-standing derivatives related to the sale of milestone payments	17,201	39,592	2,047
Total September 2009 financial transaction expenses	<u>\$ 38,488</u>	<u>\$ 56,297</u>	<u>\$ 5,312</u>

	At December 31,	
	2011	2010
	(in thousands)	
Liabilities:		
2012 Notes, excluding fair value of embedded derivative	\$ —	\$ 124,902
Embedded derivative related to 2012 Notes	—	12,089
Derivatives related to the sale of milestone payments	—	77,799
Total liabilities related to September 2009 financial transactions	<u>\$ —</u>	<u>\$ 214,790</u>

O. 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 December 31, 2011, the Company had \$94.0 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.

P. Credit Agreement

On January 7, 2011, the Company entered into a credit agreement with Bank of America, N.A., as administrative agent and lender. The credit agreement provides for a \$100.0 million revolving credit facility that is initially unsecured. As of December 31, 2011, the Company had not borrowed any amount under the credit agreement.

The Company may elect that the loans under the credit agreement bear interest at a rate per annum equal to (i) LIBOR plus 1.50%, or (ii) the rate of interest publicly announced from time to time by Bank of America as its prime rate. The Company may prepay the loans, in whole or in part, in

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Notes to Consolidated Financial Statements (Continued)

P. Credit Agreement (Continued)

minimum amounts without premium or penalty, other than customary breakage costs with respect to LIBOR borrowings. The Company may borrow, repay and reborrow under the facility until July 6, 2012, at which point the facility terminates.

The agreement contains customary representations and warranties, affirmative and negative covenants and events of default, including payment defaults, defaults for breaches of representations and warranties, covenant defaults and cross defaults. The credit agreement also requires that the Company comply with certain financial covenants, including a covenant that requires the Company to maintain at least \$400.0 million in cash, cash equivalents and marketable securities in domestic deposit and securities accounts, and a covenant that limits the Company's quarterly net losses.

The obligation of the lender to make an initial advance under the credit agreement is subject to a number of conditions, including a satisfactory due diligence review of the Company's financial position and business. Also, if, prior to an initial borrowing under the credit agreement, the Company engages in certain investment, acquisition or disposition transactions or prepays indebtedness, such activities could restrict the Company's ability to borrow under the credit agreement.

If the Company borrows under the credit agreement, the Company will become subject to certain additional negative covenants, subject to exceptions, restricting or limiting the Company's ability and the ability of the Company's subsidiaries to, among other things, grant liens, make certain investments, incur indebtedness, make certain dispositions and prepay indebtedness.

If the Company defaults under certain provisions of the credit agreement, including any default of a financial covenant, the loans will become secured by the Company's cash, cash equivalents and marketable securities with a margined value of \$100.0 million. In addition, if an event of default occurs, the interest rate would increase and the administrative agent would be entitled to take various actions, including the acceleration of payment of amounts due under the loan.

Q. Income Taxes

The components of income (loss) before provision for (benefit from) income taxes during the three years ended December 31, 2011 consisted of the following:

	2011	2010	2009
	(in thousands)		
United States	\$ 343,515	\$ (719,859)	\$ (621,455)
Foreign	(283,070)	(34,767)	(20,723)
Income (loss) before provision for income taxes	\$ 60,445	\$ (754,626)	\$ (642,178)

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Notes to Consolidated Financial Statements (Continued)

Q. Income Taxes (Continued)

The components of provision for income taxes during the three years ended December 31, 2011 consisted of the following:

	<u>2011</u>	<u>2010</u>	<u>2009</u>
	(in thousands)		
Current taxes:			
United States	\$ 22,275	\$ —	\$ —
Foreign	(561)	—	—
State	8,655	—	—
	<u>\$ 30,369</u>	<u>\$ —</u>	<u>\$ —</u>
Deferred taxes:			
United States	\$ 19,629	\$ —	\$ —
Foreign	(32,692)	—	—
State	1,960	—	—
	<u>\$ (11,103)</u>	<u>\$ —</u>	<u>\$ —</u>
Provision for income taxes	<u>\$ 19,266</u>	<u>\$ —</u>	<u>\$ —</u>

The Company's federal statutory income tax rate for 2011 was 35% and for 2010 and 2009 was 34%. The Company had income from operations in 2011 and incurred losses from operations in 2010 and 2009. The Company recorded a valuation allowance against its net operating losses and other net deferred tax assets due to uncertainties related to the realizability of these tax assets.

The difference between the Company's "expected" tax provision (benefit), as computed by applying the U.S. federal corporate tax rate to income (loss) before provision for income taxes, and actual tax is reconciled as follows:

	<u>2011</u>	<u>2010</u>	<u>2009</u>
	(in thousands)		
Income (loss) before provision for income taxes	\$ 60,445	\$ (754,626)	\$ (642,178)
Expected tax provision (benefit)	21,156	(256,574)	(218,341)
State taxes, net of federal benefit	10,624	(46,108)	(38,965)
Foreign rate differential	43,629	632	674
Tax credits	(51,086)	(23,292)	(13,027)
Unbenefited operating losses	(6,286)	322,551	260,741
Non-deductible expenses	1,953	2,158	8,244
Other	(724)	633	674
Income tax provision	<u>\$ 19,266</u>	<u>\$ —</u>	<u>\$ —</u>

For federal income tax purposes, as of December 31, 2011, the Company has net operating loss carryforwards of approximately \$2.7 billion, and tax credits of \$121.9 million, which may be used to offset future federal income and tax liability, respectively. For state income tax purposes, the Company has net operating loss carryforwards of approximately \$1.8 billion, and tax credits of approximately \$56 million, which may be used to offset future state income and tax liability, respectively. These operating loss carryforwards began to expire in 2006, and the tax credit carryforwards began to expire in 2005. After consideration of all the evidence, both positive and negative, management has established a valuation allowance for the full amount of the 2011 deferred tax asset because it is more likely than not that the deferred tax asset will not be realized. In future periods, if management determines that it is more likely than not that the deferred tax asset will be realized, (i) the valuation

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Notes to Consolidated Financial Statements (Continued)

Q. Income Taxes (Continued)

allowance would be decreased, (ii) a portion or all of the deferred tax asset would be reflected on the Company's consolidated balance sheet and (iii) the Company would record non-cash benefits in its statements of operations related to the reflection of the deferred tax asset on the Company's consolidated balance sheet.

Unrecognized tax benefits during the two years ended December 31, 2011 consisted of the following:

	<u>2011</u>	<u>2010</u>
	<u>(in thousands)</u>	
Unrecognized tax benefits beginning of year	\$ 2,374	\$ 1,858
Gross change for current year positions	2,564	516
Increase for prior period positions	—	—
Decrease for prior period positions	—	—
Decrease due to settlements and payments	(23)	—
Decrease due to statute limitations	(560)	—
Unrecognized tax benefits end of year	<u>\$ 4,360</u>	<u>\$ 2,374</u>

The Company had gross unrecognized tax benefits of \$4.4 million as of December 31, 2011 and \$2.4 million as of December 31, 2010. At December 31, 2011, \$4.4 million represented the amount of unrecognized tax benefits that, if recognized, would result in a reduction of the Company's effective tax rate. In the next twelve months it is reasonably possible that the Company will reduce the balance of its unrecognized tax benefits by \$0.5 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.

Deferred tax assets and liabilities are determined based on the difference between financial statement and tax bases using enacted tax rates in effect for the year in which the differences are expected to reverse. The components of the deferred taxes at December 31 were as follows:

	<u>2011</u>	<u>2010</u>
	<u>(in thousands)</u>	
Deferred tax assets:		
Net operating loss	\$ 870,367	\$ 944,275
Tax credit carryforwards	167,759	112,467
Property and equipment	15,537	22,483
Intangibles	71,076	—
Deferred revenues	59,939	138,809
Stock-based compensation	90,563	81,211
Inventory	23,883	38,810
Accrued expenses and other	30,636	30,078
Unrealized Loss	245	—
Gross deferred tax assets	<u>1,330,005</u>	<u>1,368,133</u>
Valuation allowance	(1,329,775)	(1,368,133)
Total deferred tax assets	<u>230</u>	<u>—</u>
Deferred tax liabilities:		
Contingent consideration	(14,241)	—
Acquired intangibles	(229,696)	(160,278)
Net deferred tax liabilities	<u>\$ (243,707)</u>	<u>\$ (160,278)</u>

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

Q. Income Taxes (Continued)

Generally, tax return deductions are allowable on stock-based compensation plans, but, may arise in different amounts and periods from when stock-based compensation expense is recognized in the financial statements. If the tax return deduction for an award exceeds the cumulative stock-based compensation expense recognized in the financial statements, any excess tax benefit is recognized as additional paid-in capital when the deduction reduces income tax payable. The net tax amount of the unrealized excess tax benefits as of December 31, 2011 was approximately \$114 million. As of December 31, 2011, the gross amount of this excess tax deduction in the net operating loss carryforward was approximately \$525 million.

The valuation allowance decreased by \$38.4 million from December 31, 2010 to December 31, 2011 because the Company had net income in 2011.

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 2007 and any other major taxing jurisdiction for years before 2005, except where the Company has net operating losses or tax credit carryforwards that originate before 2005. The Company completed an examination by the Internal Revenue Service with respect to 2006 in June 2009 with no material changes. The Company is currently under examination by Revenue Quebec for the year ended March 11, 2009 and the year ended December 31, 2007. No adjustments have been reported. The Company is not under examination by any other jurisdictions for any tax year.

The Company currently intends to reinvest the total amount of its unremitted earnings in the local international jurisdiction or to repatriate the earnings only when tax-effective. As such, the Company has not provided for U.S. federal income taxes on the unremitted earnings of its international subsidiaries. Upon repatriation of those earnings, in the form of dividends or otherwise, the Company would be subject to U.S. federal income taxes (subject to an adjustment for foreign tax credits) and withholding taxes payable to the various foreign countries. Determination of the amount of the unrecognized deferred U.S. federal income tax liability is not practical due to the complexity associated with this hypothetical calculation; however, unrecognized foreign tax credits would be available to reduce some portion of the U.S. federal income tax liability.

R. Restructuring Expense

In June 2003, Vertex 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 was designed to re-balance the Company's relative investments in research and development to better support the Company's long-term strategy. At that time, the restructuring plan included a workforce reduction, write-offs of certain assets and a decision not to occupy approximately 290,000 square feet of specialized laboratory and office space in Cambridge, Massachusetts under lease to Vertex (the "Kendall Square Lease"). The Kendall Square Lease commenced in January 2003 and has a 15-year term. In the second quarter of 2005, the Company revised its assessment of its real estate requirements and decided to use approximately 120,000 square feet of the facility subject to the Kendall Square Lease (the "Kendall Square Facility") for its operations, beginning in 2006. The remaining rentable square footage of the Kendall Square Facility currently is subleased to third parties.

The Company's initial estimate of its liability for net ongoing costs associated with the Kendall Square Lease obligation was recorded in the second quarter of 2003 at fair value. The restructuring

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

R. Restructuring Expense (Continued)

expense incurred from the second quarter of 2003 through the end of the first quarter of 2005 (i.e., immediately prior to the Company's decision to use a portion of the Kendall Square Facility for its operations) relates to the estimated incremental net ongoing lease obligations associated with the entire Kendall Square Facility, together with imputed interest costs relating to the restructuring liability. The restructuring expense incurred in the period beginning in the second quarter of 2005 relates only to the portion of the building that the Company is not occupying and does not intend to occupy for its operations. The remaining lease obligations, which are associated with the portion of the Kendall Square Facility that the Company occupies and uses for its operations, are recorded as rental expense in the period incurred. The Company reviews its assumptions and estimates quarterly and updates its estimates of this liability as changes in circumstances require. The expense and liability recorded is calculated using probability-weighted discounted cash-flows of the Company's estimated ongoing lease obligations, including contractual rental and build-out commitments, net of estimated sublease rentals, offset by related sublease costs.

In estimating the expense and liability under its Kendall Square Lease obligation, the Company estimated (i) the costs to be incurred to satisfy rental and build-out commitments under the lease (including operating costs), (ii) the lead-time necessary to sublease the space, (iii) the projected sublease rental rates, and (iv) the anticipated durations of subleases. The Company uses a credit-adjusted risk-free rate of approximately 10% to discount the estimated cash flows. The Company reviews its estimates and assumptions on at least a quarterly basis, and intends to continue such reviews until the termination of the Kendall Square Lease, and will make whatever modifications the Company believes necessary, based on the Company's best judgment, to reflect any changed circumstances. The Company's estimates have changed in the past, and may change in the future, resulting in additional adjustments to the estimate of the liability. Changes to the Company's estimate of the liability are recorded as additional restructuring expense/(credit). In addition, because the Company's estimate of the liability includes the application of a discount rate to reflect the time-value of money, the Company records imputed interest costs related to the liability each quarter. These costs are included in restructuring expense on the Company's consolidated statements of operations.

The restructuring liability of \$26.3 million at December 31, 2011 related solely to the portion of the Kendall Square Facility that the Company does not intend to use for its operations and included other related lease obligations, recorded at net present value. The Company classified \$4.9 million of the total restructuring liability at December 31, 2011 as short-term, and \$21.4 million as long-term. The short-term portion of the restructuring liability represented the net amount the Company expects to pay in 2012.

The activity related to restructuring and other liability for 2003 was as follows:

	<u>Charge in 2003</u>	<u>Cash payments in 2003</u>	<u>Non-cash write-off in 2003</u>	<u>Liability as of December 31, 2003</u>
	(in thousands)			
Lease restructuring and other operating lease expense	\$ 84,726	\$ (15,200)	\$ —	\$ 69,526
Employee severance, benefits and related costs	2,616	(2,616)	—	—
Leasehold improvements and asset impairments	4,482	—	(4,482)	—
Total	<u>\$ 91,824</u>	<u>\$ (17,816)</u>	<u>\$ (4,482)</u>	<u>\$ 69,526</u>

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

R. Restructuring Expense (Continued)

In 2003, the lease restructuring and other operating lease expense included \$78.7 million of lease restructuring expense and \$6.0 million of lease operating expense incurred prior to the decision not to occupy the Kendall Square Facility. The restructuring accrual as of December 31, 2003 related only to the lease restructuring expense.

The activity related to restructuring for 2004 through 2011 was as follows:

	Restructuring Liability			
	2011	2010	2009	2004-2011
	(in thousands)			
Liability, beginning of the period	\$ 29,595	\$ 34,017	\$ 34,064	\$ 69,526
Cash payments	(14,904)	(14,759)	(14,924)	(148,844)
Cash received from subleases	9,548	8,836	8,637	55,014
Credit for portion of facility Vertex decided to occupy in 2005	—	—	—	(10,018)
Restructuring expense	2,074	1,501	6,240	60,635
Liability, end of the period	<u>\$ 26,313</u>	<u>\$ 29,595</u>	<u>\$ 34,017</u>	<u>\$ 26,313</u>

In each period, the Company recorded lease restructuring expense attributable to imputed interest related to the restructuring liability. In certain periods, the restructuring expense also reflected the revision of certain key estimates and assumptions about building operating expenses and sublease income.

S. Employee Benefits

The Company has a 401(k) retirement plan (the "Vertex 401(k) Plan") in which substantially all of its permanent United States employees are eligible to participate. Participants may contribute up to 60% of their annual compensation to the Vertex 401(k) Plan, subject to statutory limitations. The Company may declare discretionary matching contributions to the Vertex 401(k) Plan that are payable in Vertex common stock. The match is paid in the form of fully vested interests in a Vertex common stock fund. Employees have the ability to transfer funds from the Company common stock fund as they choose. As of December 31, 2011, 96,000 shares of common stock remained available for grant under the Vertex 401(k) Plan. The Company declared matching contributions to the Vertex 401(k) Plan as follows:

	2011	2010	2009
	(in thousands)		
Discretionary matching contributions during the year ended December 31,	\$ 8,619	\$ 6,552	\$ 6,044
Shares issued during the year ended December 31,	183	174	198
Shares issuable as of the year ended December 31,	62	42	35

T. Commitments

The Company leases its facilities and certain equipment. The Company's leases have terms through 2028. The leases of the Company's current primary facilities in Cambridge were extended in 2009 through December 2015. The term of the Kendall Square Lease began on January 1, 2003. Rent payments pursuant to the Kendall Square Lease will be subject to increase in May 2013, based on changes in an inflation index. These increases will be treated as contingent rentals. The Kendall Square Lease will expire in 2018, and the Company has the option to extend the term for two consecutive terms of ten years each. The Company occupies and uses for its operations approximately 120,000

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

T. Commitments (Continued)

square feet of the Kendall Square Facility. The Company has sublease arrangements in place for the remaining rentable square footage of the Kendall Square Facility, with terms that expire in April 2015 and August 2015. See Note R, "Restructuring Expense," for further information. In 2011, the Company entered into two leases for approximately 1.1 million square feet of office and laboratory space in Boston, Massachusetts. The Company expects that it will begin occupying and making lease payments for this space in late 2013. Please see Note I, "Fan Pier Leases," for additional information regarding this commitment.

As of December 31, 2011, future minimum commitments under Fan Pier Leases, facility operating leases with terms of more than one year and expected sublease income under the Company's subleases for the Kendall Square Facility were as follows:

Year	Fan Pier Leases	Kendall Square Lease	Sublease Income	Other Operating Leases	Total Lease Commitments (Net of Sublease Income)
	(in thousands)				
2012	\$ —	\$ 18,260	\$ (7,850)	\$ 36,455	\$ 46,865
2013	—	18,260	(8,424)	37,942	47,778
2014	67,206	18,260	(8,424)	29,025	106,067
2015	67,206	18,260	(3,942)	22,678	104,202
2016	67,206	18,260	—	4,611	90,077
Thereafter	887,211	24,346	—	10,018	921,575
Total minimum lease payments	<u>\$ 1,088,829</u>	<u>\$ 115,646</u>	<u>\$ (28,640)</u>	<u>\$ 140,729</u>	<u>\$ 1,316,564</u>

Rental expense for 2011 was \$49.4 million, which included \$11.2 million related to the Kendall Square Facility. Rental expense for 2010 was \$46.6 million, which included \$11.6 million related to the Kendall Square Facility. Rental expense for 2009 was \$39.1 million, which included \$11.5 million related to the Kendall Square Facility.

In addition, the Company has committed to make potential future milestone and royalty payments pursuant to the Alios Agreement. Payments generally become due and payable upon the achievement of certain developmental, regulatory and/or commercial milestones.

In September 2010, the Company issued \$400.0 million in aggregate principal of 2015 Notes. See Note K, "Common Stock Offerings and Convertible Senior Subordinated Notes," for further information.

U. 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 December 31, 2011 or 2010.

V. Guarantees

As permitted under Massachusetts law, the Company's Articles of Organization and Bylaws 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

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

V. Guarantees (Continued)

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, in sponsored research agreements with academic and not-for-profit institutions, in various comparable agreements involving parties performing services for the Company, and in 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, 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 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 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.

The Company entered into underwriting agreements with Merrill Lynch, Pierce, Fenner & Smith Incorporated dated February 18, 2009 and September 23, 2010, and with Goldman, Sachs & Co. dated December 2, 2009 (collectively, the "Underwriting Agreements"), in each case as the representative of the several underwriters, if any, named in such agreements, relating to the public offering and sale of shares of the Company's common stock or convertible senior subordinated notes. The Underwriting Agreement relating to each offering requires the Company to indemnify the underwriters of that public offering against any loss they may suffer by reason of the Company's breach of any representation or warranty relating to that public offering, the Company's failure to perform certain covenants in those agreements, the inclusion of any untrue statement of material fact in the prospectus used in connection with that offering, the omission of any material fact needed to make those materials not misleading, and any actions taken by the Company or its representatives in connection with the offering. The representations, warranties, covenants and indemnification provisions in the Underwriting Agreements are of a type customary in agreements of this sort. The Company believes the estimated fair value of these indemnification arrangements is minimal.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

W. Geographic Information

The following table summarizes total revenues from external customers and collaborators by geographic region. Product revenues are attributed to countries based on the location of the customer. Collaborative revenues are attributed to the operations of the Company in the United States. Royalty revenues are attributed to countries based on the location of the collaborator.

	Year Ended December 31,		
	2011	2010	2009
	(in thousands)		
United States	\$ 1,389,568	\$ 143,370	\$ 101,889
Outside of the United States			
Belgium	20,289	—	—
Canada	769	—	—
Total revenues outside of the United States	21,058	—	—
Total revenues	<u>\$ 1,410,626</u>	<u>\$ 143,370</u>	<u>\$ 101,889</u>

At December 31, 2011, the net book value of the Company's property and equipment in the United States and United Kingdom was \$109.5 million and \$21.4 million, respectively, which comprised approximately 98% of the total net book value of the Company's property and equipment. At December 31, 2010, the net book value of the Company's property and equipment in the United States and United Kingdom was \$55.6 million and \$15.3 million, respectively, which comprised approximately 98% of the total net book value of the Company's property and equipment.

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

X. Quarterly Financial Data (unaudited)

	Three Months Ended			
	March 31, 2011	June 30, 2011	Sept. 30, 2011	Dec. 31, 2011
	(in thousands, except per share amounts)			
Revenues:				
Product revenues, net	\$ —	\$ 74,535	\$ 419,595	\$ 456,759
Royalty revenues	6,061	10,010	8,539	25,405
Collaborative revenues	67,601	29,879	231,066	81,176
Total revenues	73,662	114,424	659,200	563,340
Costs and expenses:				
Cost of product revenues	—	5,404	35,285	22,936
Royalty expenses	2,666	3,902	3,121	7,191
Research and development expenses	158,612	173,604	189,052	186,438
Sales, general and administrative expenses	71,523	96,663	110,654	121,881
Restructuring expense (credit)	760	741	(419)	992
Intangible asset impairment charge	—	—	105,800	—
Total costs and expenses	233,561	280,314	443,493	339,438
Income (loss) from operations	(159,899)	(165,890)	215,707	223,902
Interest income	1,402	202	77	197
Interest expense	(12,001)	(6,962)	(7,059)	(12,430)
Change in fair value of derivative instruments	(5,598)	(2,220)	(8,115)	(868)
Income (loss) before provision for (benefit from) income taxes	(176,096)	(174,870)	200,610	210,801
Provision for (benefit from) income taxes	—	24,448	(27,842)	22,660
Net income (loss)	(176,096)	(199,318)	228,452	188,141
Net income (loss) attributable to noncontrolling interest (Alios)	—	(25,249)	7,342	29,512
Net income (loss) attributable to Vertex	\$ (176,096)	\$ (174,069)	\$ 221,110	\$ 158,629
Net income (loss) per share attributable to Vertex common shareholders:				
Basic	\$ (0.87)	\$ (0.85)	\$ 1.06	\$ 0.76
Diluted	\$ (0.87)	\$ (0.85)	\$ 1.02	\$ 0.74
Shares used in per share calculations:				
Basic	202,329	204,413	206,002	206,758
Diluted	202,329	204,413	219,349	217,602

VERTEX PHARMACEUTICALS INCORPORATED

Notes to Consolidated Financial Statements (Continued)

X. Quarterly Financial Data (unaudited) (Continued)

	Three Months Ended			
	March 31, 2010	June 30, 2010	Sept. 30, 2010	Dec. 31, 2010
	(in thousands, except per share amounts)			
Revenues:				
Royalty revenues	\$ 6,407	\$ 7,262	\$ 8,173	\$ 8,402
Collaborative revenues	16,022	24,360	15,622	57,122
Total revenues	<u>22,429</u>	<u>31,622</u>	<u>23,795</u>	<u>65,524</u>
Costs and expenses:				
Royalty expenses	3,367	3,086	3,228	3,049
Research and development expenses	143,012	155,082	170,434	168,888
Sales, general and administrative expenses	35,552	40,915	48,855	62,478
Restructuring expense (credit)	780	2,112	866	(2,257)
Total costs and expenses	<u>182,711</u>	<u>201,195</u>	<u>223,383</u>	<u>232,158</u>
Loss from operations	(160,282)	(169,573)	(199,588)	(166,634)
Interest income	455	484	493	523
Interest expense	(3,955)	(3,683)	(3,951)	(7,686)
Change in fair value of derivative instruments	(1,489)	(27,234)	(5,911)	(6,595)
Net loss attributable to Vertex	<u>\$ (165,271)</u>	<u>\$ (200,006)</u>	<u>\$ (208,957)</u>	<u>\$ (180,392)</u>
Basic and diluted net loss per share attributable to Vertex common shareholders	<u>\$ (0.83)</u>	<u>\$ (1.00)</u>	<u>\$ (1.04)</u>	<u>\$ (0.90)</u>
Basic and diluted weighted-average number of common shares outstanding	198,935	200,397	200,887	201,355

Confidential Treatment Requested. Confidential portions of this document have been redacted and have been separately filed with the Commission.

LICENSE, DEVELOPMENT, MANUFACTURING AND COMMERCIALIZATION AGREEMENT

by and between

Vertex Pharmaceuticals Incorporated

and

Janssen Pharmaceutica, N.V.

*Portions of this exhibit, indicated by the mark “[***],” have been redacted pursuant to a confidential treatment request. An unredacted version of this exhibit has been filed separately with the Commission.*

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Exhibits

Exhibit 4.5(a) Supply Agreement Key Elements

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License, Development, Manufacturing and Commercialization Agreement

This License, Development, Manufacturing and Commercialization Agreement (this “Agreement”) is effective as of June 30, 2006 (the “Effective Date”) and is entered into by and between Vertex Pharmaceuticals Incorporated, a Massachusetts corporation with corporate offices at 130 Waverly Street, Cambridge, MA 02139-4242, United States of America (“Vertex”) and Janssen Pharmaceutica, N.V., a Belgium corporation with corporate offices at 30, Turnhoutsesteenweg, B-2340 Beerse, Belgium (“Janssen”).

Background

WHEREAS, Vertex is developing VX-950, a novel inhibitor of the NS3/4A hepatitis C viral protease, under a global development plan; and

WHEREAS, Vertex and Janssen would like Janssen to assist in the development of, and to commercialize, VX-950 in the Territory (as defined below).

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants herein contained, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows.

Article 1 - Definitions

1.1 (Intentionally left blank)

1.2 “**Additional Development Activities**” shall have the meaning set forth in Section 3.5.

1.3 “**Affiliate**” shall mean, with respect to any Person, any other Person that directly or indirectly controls, is controlled by or is under direct or indirect common control with, such Person. For purposes of this Section 1.3, the term “control” means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of

voting securities, by contract or otherwise. Control of any Person by another Person will be presumed if fifty percent (50%) or more of the securities or other ownership interests representing the equity, the voting stock or general partnership interest of the first Person are owned, controlled or held, directly or indirectly, by the other Person, or by an Affiliate of the other Person.

1.4 “**API**” means the active pharmaceutical ingredient that is intended to be used in the manufacture of a Product Candidate or a Product.

1.5 [***]

*Portions of this exhibit, indicated by the mark “[***],” have been redacted pursuant to a confidential treatment request. An unredacted version of this exhibit has been filed separately with the Commission.*

- 1.6** “ **Business Day** ” means a day in which banking institutions in Boston, Massachusetts are open for business.
- 1.7** “ **Calendar Quarter** ” shall mean a calendar quarter during any Calendar Year based on the Janssen Universal Calendar for that year, a copy of which, for 2006, is attached hereto as Schedule 1.7, and which shall be updated by Janssen for each Calendar Year during the term of this Agreement consistent with the Janssen Universal Calendar used for Janssen’s internal business purposes; provided, however, that the first Calendar Quarter under this Agreement shall extend from the Effective Date to the end of the then-current Calendar Quarter and the last Calendar Quarter under this Agreement shall extend from the first day of such Calendar Quarter until the effective date of the termination or expiration of the Agreement.
- 1.8** “ **Calendar Year** ” shall mean a calendar year during the term of this Agreement based on the Janssen Universal Calendar for that year, a copy of which, for 2006, is attached hereto as Schedule 1.7, and which shall be updated by Janssen for each Calendar Year during the term of this Agreement consistent with the Janssen Universal Calendar used for Janssen’s internal business purposes. For the first Calendar Year, the Calendar Year shall begin on the Effective Date and the last day shall be December 31, 2006. The last Calendar Year of the term of this Agreement shall begin on the first day of the Janssen Universal Calendar Year for the year during which termination or expiration of the Agreement will occur, and the last day of such Calendar Year shall be the effective date of such termination or expiration.
- 1.9** “ **Change of Control** ” means a transaction or series of related transactions that results in (a) the holders of outstanding voting securities of a Party immediately prior to such transaction ceasing to represent at least [***] of the combined outstanding voting power of that Party, or if the surviving entity (or its parent) into which that Party may have merged or been combined, immediately after such transaction or series of transactions; (b) any Third Party (other than a trustee or other fiduciary holding securities under an employee benefit plan) becoming the beneficial owner of [***] of the combined voting power of the outstanding securities of a Party, including as a single Third Party all Third Parties who act together as a “group” for purposes of acquiring shares of a Party, as referenced in Section 13 (d) of the Securities Act of 1934; or (c) a sale or other disposition to a Third Party of all or substantially all of a Party’s assets or business.
- 1.10** “ **Clinical Trial** ” means a Phase I Clinical Trial, a Phase II Clinical Trial, a Phase III Clinical Trial or a Pivotal Clinical Trial.
- 1.11** “ **Code** ” shall have the meaning set forth in Section 13.4.2.
- 1.12** “ **Combination Product** ” means a single product that includes one or more therapeutically active ingredients other than a Product Candidate or a Product, in combination with a Product Candidate or Product. All references to Product in this Agreement shall be deemed to include a Combination Product unless otherwise specifically noted.

*Portions of this exhibit, indicated by the mark “[***],” have been redacted pursuant to a confidential treatment request. An unredacted version of this exhibit has been filed separately with the Commission.*

- 1.13** “ **Commercialization** ” or “ **Commercialize** ” means to take any action directed to marketing, promoting, distributing, importing or selling a Product, or obtaining pricing and reimbursement approvals for that Product. Commercialization shall also include post-approval Investigator-Initiated Clinical Studies and Phase IV Clinical Trials.
- 1.14** “ **Committees** ” shall have the meaning set forth in Section 2.3.
- 1.15** Intentionally left blank.
- 1.16** “ **Compound** ” means VX-950, [***] , and all of its or their prodrugs and metabolites, its or their stereoisomers and tautomers, and all of the esters, salts, hydrates, solvates, inclusion complexes and polymorphs of any of the foregoing.
- 1.17** “ **Control**” or “**Controlled by** ” means the ownership or other legal authority or right of a Party to grant a license or sublicense of intellectual property to another Party without breaching the terms of any agreement with a Third Party, infringing the intellectual property rights of a Third Party, or misappropriating the proprietary or trade secret information of a Third Party.
- 1.18** “**Desired Label**” shall have the meaning set forth in Section 1.41.
- 1.19** “ **Development** ” or “ **Develop** ” means any non-clinical and clinical drug development activities that are customarily undertaken after a compound has been designated as a development candidate [***] including but not limited to [***]
- 1.20** “ **Development Program** ” means all activities associated with the Development of Product Candidates pursuant to the Global Development Plan and all Additional Development Activities.
- 1.21** [***]
- 1.22** [***]
- 1.23** “ **Diligent Efforts** ” means, with respect to each Party’s obligations related to Developing, Manufacturing and Commercializing Product Candidates and Products, the carrying out of those obligations [***]
- 1.24** “ **Effective Date** ” shall have the meaning set forth in the preamble to this Agreement.
- 1.25** “ **EMA** ” means the European Medicines Evaluation Agency or any successor EU agency that is responsible for approving the sale of pharmaceuticals in the EU.
- 1.26** “ **European Union** ” or “ **EU** ” means the countries of the European Union, as the European Union is constituted as of the Effective Date and as it may be expanded from time to time, [***]

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- 1.27 “ **Excluded Claim** ” shall have the meaning set forth in Section 14.5.7.
- 1.28 “ **Excluded Territory** ” means the Far East and North America.
- 1.29 “ **Exclusivity Period** ” means the [***] beginning on the Effective Date.
- 1.30 “ **Executive Officers** ” means the Chief Executive Officer of Vertex and the World Wide Chairman, Pharmaceuticals Group of Johnson & Johnson.
- 1.31 “ **Existing Third Party Agreements** ” means the agreements between Vertex and Third Parties listed on Schedule 1.31 hereto.
- 1.32 “ **Far East** ” means the countries listed on Schedule 1.32 hereto.
- 1.33 “ **FDA** ” means the United States Food and Drug Administration, or any successor U.S. governmental agency that is responsible for approving the sale of pharmaceuticals in the United States.
- 1.34 “ **Field** ” means all human and animal therapeutic and/or prophylactic uses of Product Candidates and Products.
- 1.35 “ **First Commercial Sale** ” means, with respect to any Product, the first arm’s-length sale of that Product to a Third Party in a country of the Territory for use or consumption by the general public in such country (rather than, *e.g.*, in a Phase IV Clinical Trial) after Marketing Authorization for such Product has been obtained in such country. For the avoidance of doubt, a sale in a particular country prior to receipt of all marketing approvals necessary to commence regular commercial sales in that country, such as so-called “treatment IND sales,” “named patient sales” and “compassionate use sales,” shall not be construed as a First Commercial Sale in that country. Any such sale shall however constitute a part of Net Sales.
- 1.36 “ **FTE** ” means the equivalent in time of the work of one scientist or other professional conducting activities hereunder on a full time basis for a Calendar Year, [***]
- 1.37 “ **FTE Rate** ” means, for 2006, [***] per FTE; provided that effective January 1 of each Calendar Year, commencing with January 1, 2007, the FTE Rate applicable to each Party’s FTE’s will be the amount obtained by multiplying the FTE Rate applicable on December 31 of the immediately preceding Calendar Year by $1 + ((CPI_x - CPI_y) / CPI_y)$, where CPI_x is the Consumer Price Index for All Urban Consumers in the Boston Metropolitan Area published by the Bureau of Labor Statistics of the United States Department of Labor for December of the immediately preceding Calendar Year and CPI_y is the Consumer Price Index for All Urban Consumers in the Boston Metropolitan Area published by the Bureau of Labor Statistics of the United States Department of Labor for the month immediately preceding the Effective Date, [***] Any such increase shall be rounded to the nearest [***].

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1.38 “ **GAAP** ” means accounting principles generally accepted in the United States, applied on a consistent basis.

1.39 “ **Generic Version** ” shall have the meaning set forth in Section 9.4.2.

1.40 “ **Global Development Costs** ” [***]

[***]

[***]

[***]

[***]

[***]

1.41 “ **Global Development Plan** ” or “ **GDP** ” means the initial plan outlining the Parties’ intended program to Develop Product Candidates or Products in North America and the Territory, including a general description of all related activities therefor, all as reflected in the Global Development Plan, with associated budgets, discussed by the Parties immediately prior to the Effective Date and to which the Parties have agreed. The Parties have designed the Global Development Plan to support certain anticipated Product indications and label claims and related necessary label information (the “Desired Label”), and the Development activities listed in the Global Development Plan are considered critical to obtaining Regulatory Approval in both the United States and the EU for the Desired Label. Other Development activities that are critical to obtaining Regulatory Approval for the Desired Label in the United States or the EU, or that are required by a Regulatory Authority in either the United States or the EU for the Desired Label, may be added to the Global Development Plan from time to time by amendment as provided herein. Development activities that are not critical to obtaining Regulatory Approval in the United States or the EU for the Desired Label shall be considered Additional Development Activities, unless the Parties mutually agree to include such activities in the Global Development Plan. The Global Development Plan as amended from time to time in accordance with the terms of this Agreement shall constitute, as so amended, the Global Development Plan.

1.42 “ **Good Clinical Practice** ” or “ **GCP** ” means the current good clinical practice applicable to the clinical Development of the Product under applicable law including without limitation the ICH guidelines, or in the event such standards are less stringent than the current U.S. Good Clinical Practice, then “Good Clinical Practice” or “GCP” shall mean current U.S. Good Clinical Practice.

1.43 “ **Good Laboratory Practice** ” or “ **GLP** ” means the current good laboratory practice applicable to the Development of the Product under applicable law, including without limitation 21 C.F.R. Part 58, or in the event such standards are less stringent than the

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current U.S. Good Laboratory Practice, then “Good Laboratory Practice” or “GLP” shall mean current U.S. Good Laboratory Practice.

- 1.44** “ **Good Manufacturing Practice** ” or “ **GMP** ” means the current good manufacturing practice applicable to the Manufacturing of the Product under applicable law, including without limitation 21 C.F.R. parts 210 and 211 (as the same may be amended) and all applicable FDA rules, regulations, orders and guidances.
- 1.45** “ **HCV Infection** ” means human infection with the hepatitis C virus.
- 1.46** “ **Improvement** ” means any enhancement, whether or not patentable, in the formulation, use, preparation, presentation, means of delivery, or dosage of a Product Candidate or Product.
- 1.47** “ **IND** ” shall mean an Investigational New Drug Application filed with FDA or a similar application filed with an applicable Regulatory Authority outside of the United States, such as a clinical trial application (CTA) or a clinical trial exemption (CTX).
- 1.48** “ **Indemnitee** ” shall have the meaning set forth in Section 12.3.3.
- 1.49** “ **Indemnitor** ” shall have the meaning set forth in Section 12.3.3.
- 1.50** “ **Information** ” means any and all information and data, including all scientific, pre-clinical, clinical, regulatory, manufacturing, marketing, financial and commercial information or data, whether communicated in writing, electronically or orally or by any other method, which is provided by one Party to the other Party in connection with this Agreement.
- 1.51** “ **Initiation** ” means, with respect to a particular Clinical Trial, the administration of the [***] dose of a Product Candidate to the [***] patient in that Clinical Trial.
- 1.52** “ **Invention** ” means any process, method, use, composition of matter, article of manufacture, discovery or finding that is conceived or reduced to practice (whether or not patentable).
- 1.53** “ **Investigator-Initiated Clinical Study** ” means a human clinical trial or study of the Product that is sponsored and conducted by a Third Party who is a health-care professional, under an agreement with a Party pursuant to which that Party provides clinical supplies of the Product and/or funding for the clinical trial or study.
- 1.54** “ **Janssen Know-How** ” means all information, materials, discoveries, Improvements, processes, methods, protocols, formulas, data, Inventions and trade secrets, patentable or otherwise, that do not fall within Janssen Patent Rights, and (i) that are Controlled by Janssen or any of its Affiliates as of the Effective Date or (ii) are discovered, created or developed, and Controlled, by Janssen or its Affiliates in the course of Janssen’s performance of the Development Program, or of Manufacturing activities, under this

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Agreement or any supply agreement under which Janssen or any of its Affiliates supplies Compounds, Product Candidates or Products to Vertex, or during studies of a Compound, Product Candidate or Product undertaken after the end of the Development Program, or as part of the Commercialization of a Compound, Product Candidate or Product, and (iii) that are related to the Development, utilization, Manufacture or Commercialization of any Compound, Product Candidate or Product.

- 1.55** “ **Janssen Patent Rights** ” means all patents and patent applications that generically or specifically claim (a) (i) a Compound, a Product Candidate or a Product, (ii) a process for manufacturing a Compound, a Product Candidate or a Product, or an Intermediate used in such process; or (iii) a use of the Compound, a Product Candidate or a Product, and that are Controlled by Janssen or any of its Affiliates as of the Effective Date, or (b) Inventions Controlled by Janssen or any of its Affiliates that are conceived or reduced to practice in the course of Janssen’s performance of the Development Program, or of Manufacturing activities, under this Agreement or any supply agreement under which Janssen or any of its Affiliates supplies Product Candidates or Products to Vertex, or during studies of a Product Candidate or Product undertaken after the end of the Development Program, or as part of the Commercialization of a Product Candidate or Product, and that are related to the Development, utilization, Manufacture or Commercialization of the Compound or any Product Candidate or Product. Included within the definition of Janssen Patent Rights are all continuations, continuations-in-part, divisions, patents of addition, reissues, renewals or extensions, substitutions, re-examinations or restorations, registrations and revalidations thereof, and all supplementary protection certificates and the like. Schedule 1.55 lists all patent applications and patents encompassed within Janssen Patent Rights on the Effective Date.
- 1.56** “ **Joint Commercialization Committee** ” and “ **JCC** ” have the meaning set forth in Section 5.2.
- 1.57** “ **Joint Development Committee** ” and “ **JDC** ” have the meaning set forth in Section 3.1.
- 1.58** “ **Joint Know-How** ” means all information, Improvements and Inventions created, developed or invented jointly by employees of Janssen and Vertex or their Affiliates, or by others acting on behalf of Janssen and Vertex, in the course of activities undertaken under this Agreement.
- 1.59** “ **Joint Manufacturing Committee** ” and “ **JMC** ” have the meaning set forth in Section 4.2.
- 1.60** “ **Joint Patent Rights** ” means all national, regional and international patents and patent applications, certificates of invention and applications for certificates of invention, including divisions, continuations, continuations-in-part, additions, reissues, renewals, extensions, substitutions, re-examinations or restorations, registrations and revalidations, and supplementary protection certificates or the like or any of the foregoing and all foreign equivalents thereof, that, when granted, recite a claim directed to Joint Know-How.

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- 1.61 “ **Joint Philanthropic Committee** ” and “ **JPC** ” shall have the meaning set forth in Article 6.
- 1.62 “ **Joint Steering Committee** ” and “ **JSC** ” have the meaning set forth in Section 2.2.
- 1.63 “ **Key Countries** ” means at the time of measurement the Major Market Countries, and to the extent not included as a Major Market Country, the [***] in the Territory with respect to all pharmaceutical sales as reported by IMS, or by another independent Third Party source of market data selected by the Parties by mutual agreement.
- 1.64 “ **Key Opinion Leaders** ” or “ **KOLs** ” means scientific or health care professionals who are recognized experts in the relevant scientific or health care field, which in the context of this Agreement is the investigation and treatment of HCV Infection.
- 1.65 “ **MAA** ” means a Marketing Authorization Application, or similar application or submission for Marketing Authorization, that is filed to obtain marketing approval for a Product Candidate or Product in the EU.
- 1.66 “ **Major Market Countries** ” means [***]
- 1.67 “ **Manufacturing** ” or “ **Manufacture** ” means all of the activities relating to production of a Product Candidate or Product, including without limitation, purchasing raw materials and Intermediates, production of API, [***], tableting, and all related quality control and quality assurance and all storage, shipping and handling. Manufacturing also includes Packaging and manufacturing technical transfer activities. “ **Intermediate** ” as used herein means [***].
- 1.68 “ **Manufacturing Cost** ” means the cost of [***]
- 1.69 Intentionally left blank.
- 1.70 “ **Marketing Authorization** ” means all approvals from the relevant Regulatory Authority necessary to market and sell a Product in a particular country. For countries where governmental approval is required for pricing or reimbursement for the Product, “Marketing Authorization” shall not be deemed to occur until such pricing or reimbursement approval is obtained.
- 1.71 “ **Material Adverse Effect** ” means, with respect to any action by a Party or its Related Parties, [***]
- 1.72 “ **Medical Science Liaisons** ” or “ **MSL** ” shall have the meaning set forth in Section 5.11.
- 1.73 “ **Milestone Event** ” shall have the meaning set forth in Section 9.2.1.
- 1.74 “ **Milestone Payment** ” shall have the meaning set forth in Section 9.2.1.

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- 1.75 “ **NDA** ” means a New Drug Application or similar application or submission for Marketing Authorization that is filed with the FDA to obtain marketing approval for a Product Candidate or Product in the United States.
- 1.76 [***]
- 1.77 “ **Net Sales** ” means the gross amount billed or invoiced by Janssen or its Related Parties on arms-length sales of Product Candidates and Products (for purposes of this definition, Product Candidates and Products are referred to collectively as “Products” or a “Product”) to a Third Party other than a Related Party, less Permitted Deductions. “Permitted Deductions” for any Product includes only the following, to the extent permitted by applicable law and specifically related to the gross amount billed or invoiced:
- (i) customary transportation charges relating to the Product, including handling charges and insurance premiums relating thereto;
 - (ii) sales taxes, excise taxes and duties paid by and not refunded to the selling party and directly related to sale of the Product, and any other equivalent governmental charges imposed upon the importation, use or sale of the Product, but excluding income and similar taxes;
 - (iii) government-mandated rebates;
 - (iv) customary trade, quantity and prompt payment discounts allowed on the Product;
 - (v) allowances or credits to customers on account of retrospective price reductions affecting the Product; and
 - (vi) customary Product rebates and Product wholesaler charge-backs including those customarily granted to managed care entities

(vii) [***]

[***]

For the purposes of determining royalty rates and the royalties payable on Combination Products, Net Sales of a Product shall be calculated as follows: [***]

For purposes of clarity, no permitted deduction to Net Sales will be counted more than once or, with the exception of [***], adjusted more than [***] following the calculation of Net Sales for a given month.

Solely for the purposes of this Section 1.77, a Related Party of Janssen or of any of its Affiliates shall include a distributor acting as an actual or constructive sublicensee of rights granted hereunder with respect to sales of a Product in a particular country in the Territory, as evidenced by the fact that the distributor holds (A) sales and distribution rights for the Product in that country, coupled with (B) pricing authority or government

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pricing negotiation authority with respect to wholesalers or sub-distributors in that country.

If Janssen or any of its Related Parties makes any transfer of a Product to a Third Party as part of a multiproduct transaction, Net Sales of each unit of the Product transferred will be determined on a country-by-country basis, and will be equal to [***]

- 1.78** “ **Non-Incurred Amount** ” shall have the meaning set forth in Section 3.4.3.
- 1.79** “ **Non-Publishing Party** ” shall have the meaning set forth in Section 11.3.
- 1.80** [***]
- 1.81** (a) “ **North America** ” means the United States, Canada and Mexico, and the territories and possessions of each of them.
(b) “**North America Product Materials**” shall have the meaning set forth in Section 5.5(a).
- 1.82** [***]
- 1.83** “ **Packaging** ” means importation, quality control, testing, primary and secondary packaging (including all labeling), qualified person release, storage and shipping and handling.
- 1.84** “ **Packaging Regulatory Approval** ” means all requisite approvals of applicable Regulatory Authorities necessary for the Packaging of a Product.
- 1.85** “ **Party** ” means Janssen or Vertex, and “ **Parties** ” means Janssen and Vertex.
- 1.86** “ **Patent Costs** ” shall mean all reasonable costs and expenses incurred by Vertex in preparing, filing, prosecuting and/or maintaining Vertex Patent Rights, including, without limitation, out-of-pocket costs and reasonable time spent by Vertex’s professional personnel in patent preparation and prosecution, measured at the FTE Rate then in effect.
- 1.87** “ **Permitted Sublicensee** ” means a sublicensee of either Party under a sublicense permitted under Article 7 of this Agreement.
- 1.88** “ **Person** ” means any individual, corporation, partnership, limited liability company, association, joint-stock company, trust, unincorporated organization or government or political subdivision thereof.
- 1.89** “ **Phase I Clinical Trial** ” means a human clinical trial for a Product Candidate or Product, in any country, that would satisfy the requirements of 21 CFR §312.21(a).

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- 1.90** “ **Phase II Clinical Trial** ” means a human clinical trial in any country that would satisfy the requirements of 21 CFR §312.21(b) and is intended to explore one or more doses, dose response, and duration of effect, and to generate initial evidence of clinical activity and safety, for a Product Candidate or Product in the target patient population
- 1.91** “ **Phase III Clinical Trial** ” means a human clinical trial in any country that would satisfy the requirements of 21 CFR §312.21(c) and is intended to confirm with statistical significance the efficacy and safety of the Product Candidate or Product, and is performed to obtain Regulatory Approval.
- 1.92** “ **Phase IV Clinical Trial** ” means a study or data collection effort for the Product that is initiated after receipt of Regulatory Approval for the Product and is not principally intended to support or maintain a Regulatory Approval, maintain a label or otherwise obtain a labeling change. Phase IV Clinical Trials shall include, without limitation, studies related to the Product that are sponsored by a Third Party but supported by a Party (either through financial support or through the provision of study drugs). Phase IV Clinical Trials may also include a human clinical trial of the Product that is required by the Regulatory Authority in a country to be conducted following Regulatory Approval of the Product in that country, as an explicit condition of that Regulatory Approval.
- 1.93** “ **Philanthropic Funds** ” shall have the meaning set forth in Article 6.
- 1.94** “ **Pivotal Clinical Trial** ” means a Phase III Clinical Trial or, under the following circumstances, a Phase II Clinical Trial. A Phase II Clinical Trial shall be considered a Pivotal Clinical Trial if and when (a) in the United States, the protocol for that Phase II Clinical Trial shall have been reviewed by the FDA under its current Special Protocol Assessment Guidelines (or equivalent guidelines issued in the future), and any comments from the FDA on that protocol are incorporated in the final protocol for that Phase II Clinical Trial or are resolved to the FDA’s satisfaction as evidenced by further written communications from the FDA; [***]
- 1.95** “ **Primary Detail** ” means a Sales Call for the Product in which the Product receives the predominant portion of emphasis and time during the Sales Call (i.e., no other product or service receives more emphasis or time during the Sales Call, where such calculation of emphasis and time is conducted and measured in accordance with Janssen’s standard operating procedures for its own products to the target physician group for the Product.
- 1.96** “ **Product** ” means any pharmaceutical preparation in final commercial form containing the Product Candidate, for sale by prescription, over-the-counter or any other method. Product includes without limitation any Combination Product.
- 1.97** “ **Product Candidate** ” means a pharmaceutical composition containing a Compound as an active ingredient.
- 1.98** “ **Publishing Party** ” shall have the meaning set forth in Section 11.3.

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- 1.99** “ **Regulatory Approval** ” means, with respect to any country or region, all authorizations by the appropriate governmental entity or entities necessary for commercial sale of a Product in that country or region (not including pricing or reimbursement approval). “Regulatory Approval” in the United States shall mean final approval of an NDA pursuant to 21 CFR §314 (or any successor regulation having the same purpose or effect), permitting marketing of a Product in interstate commerce in the United States. “Regulatory Approval” in the European Union shall mean final approval of a MAA pursuant to Council Directive 75/319/EEC, as amended, or Council Regulation 2309/93/EEC, as amended, or pursuant to any successor regulation having the same purpose or effect.
- 1.100** “ **Regulatory Authority** ” shall mean any applicable government regulatory authority involved in granting approvals for the manufacturing, marketing and sale of a Product.
- 1.101** “ **Related Party** ” shall mean each of a Party’s Affiliates and any Permitted Sublicensees, and “ **Related Parties** ” means all of a Party’s Affiliates and Permitted Licensees.
- 1.102** “ **Results** ” shall have the meaning set forth in Section 11.3.
- 1.103** “ **Sales Call** ” means face-to-face contact (or other contact which in the future is employed to substitute, in whole or in part, for face-to-face contact) of a Sales Representative with a health care professional with prescribing authority during which scientific and/or medical information is discussed about the use of a Product for the treatment of indications for which the Product has received Regulatory Approval.
- 1.104** “ **Sales Representative** ” means an individual who engages in or manages Sales Calls and other promotional efforts with respect to a Product and who is employed by a Party or its Related Parties. For purposes of clarity, an MSL is not a Sales Representative.
- 1.105** “ **Specifications** ” means the manufacturing specifications for the Product to be filed with the FDA in the NDA.
- 1.106** “ **Supply Agreement** ” shall have the meaning set forth in Section 4.5.
- 1.107** “ **Tablet** ” means the form of the Product or Product Candidate that is ready for Packaging.
- 1.108** “ **Territory** ” means all of the countries in the world, and their territories and possessions, outside of the Excluded Territory.
- 1.109** “ **Territory Product Materials** ” shall have the meaning set forth in Section 5.5.
- 1.110** “ **Third Party** ” means an entity other than a Party or any of its Related Parties.
- 1.111** “ **Third Party Product** ” shall have the meaning set forth in Section 9.4.2.
- 1.112** “ **Trademark** ” shall mean the mark or marks used to promote and sell the Product.

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- 1.113** “ U.S. ” and “ **United States** ” and “ **United States of America** ” shall mean the United States of America and its territories and possessions.
- 1.114** “ **Valid Patent Claim** ” means a claim of an issued and unexpired patent included within the Vertex Patent Rights or Joint Patent Rights that (a) claims (i) the Compound, a Product Candidate or a Product as a composition of matter, or (ii) the formulation, method of manufacture or use of the Compound, a Product Candidate or a Product; (b) has not been revoked or held unenforceable, unpatentable or invalid by a decision of a court or other governmental agency of competent jurisdiction (which decision is not appealable or has not been appealed within the time allowed for appeal); and (c) has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue, re-examination or disclaimer or otherwise.
- 1.115** “ **Vertex Know-How** ” means all information, materials, discoveries, Improvements, processes, methods, protocols, formulas, data, Inventions and trade secrets, patentable or otherwise, that do not fall within the Vertex Patent Rights, and (i) that are Controlled by Vertex or any of its Affiliates as of the Effective Date or (ii) are discovered, created or developed, and Controlled, by Vertex or its Affiliates in the course of Vertex’s performance of the Development Program or Additional Development Activities, or of Manufacturing activities, under this Agreement or the Supply Agreement, or during studies of a Compound, Product Candidate or Product undertaken after the end of the Development Program, or as part of the Commercialization of a Compound, Product Candidate or Product, and (iii) that are related to the Development, utilization, Manufacture or Commercialization of any Compound, Product Candidate or Product; provided, however, that the term “Vertex Know-How” shall not apply to Vertex’s general drug design technology whether in hardware or software form, tangible or intangible.
- 1.116** “ **Vertex Patent Rights** ” means all patents and patent applications that generically or specifically claim (a) (i) a Compound, a Product Candidate or a Product; (ii) a process for manufacturing a Compound, a Product Candidate or a Product, or an Intermediate used in such process; or (iii) a use of the Compound, a Product Candidate or a Product, and that are Controlled by Vertex or any of its Affiliates as of the Effective Date, or (b) inventions Controlled by Vertex or any of its Affiliates that are conceived or reduced to practice in the course of either Vertex’s performance of the Development Program or Additional Development Activities, or of Manufacturing activities, under this Agreement or the Supply Agreement, or during studies of a Compound, Product Candidate or Product undertaken after the end of the Development Program, or as part of the Commercialization of a Compound, Product Candidate or Product and that are related to the Development, utilization, Manufacture or Commercialization of a Compound or any Product Candidate or Product. Included within the definition of Vertex Patent Rights are all continuations, continuations-in-part, divisions, patents of addition, reissues, renewals or extensions, substitutions, re-examinations or restorations, registrations and revalidations thereof, and all supplementary protection certificates and the like. Schedule 1.116 lists all patent applications and patents encompassed within Vertex Patent Rights as of the Effective Date.

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1.117 “VX-950” means the chemical compound referred to by Vertex as VX-950 and having the chemical structure referenced on Schedule 1.117.

Article 2 - Collaboration Scope and Governance

2.1 **Purposes of the Collaboration.** The purpose of the collaboration between Vertex and Janssen established under this Agreement is to advance the Development and Commercialization of Product Candidates and Products as rapidly as reasonably practicable, for the treatment of Hepatitis C Infection in North America and the Territory.

2.2 **Joint Steering Committee.** Promptly after the Effective Date, the Parties will establish a Joint Steering Committee (the “Joint Steering Committee” or “JSC”), as more fully described in this Section 2.2, to review all Development, Manufacturing, Commercialization and philanthropic activities being conducted by the Parties under this Agreement. Each Party will keep the Joint Steering Committee, and other relevant committees referenced in Section 2.3 below, [***] of its progress and activities under this Agreement. The Joint Steering Committee shall have no authority to amend this Agreement.

2.2.1 **Membership.** The Joint Steering Committee shall be comprised of [***] The exact number of such representatives [***] or such other number as the Parties may agree. Each Party shall provide the other with a list of its initial members of the Joint Steering Committee within [***]. Each Party will use all reasonable efforts to maintain the continuity of its representation, although each Party may nevertheless replace or substitute any or all of its representatives at any time. On an annual basis, the JSC shall meet [***] with [***] meetings being in person. Either Party may request that the JSC meet at any time upon [***] notice to the other Party, for any purpose properly addressed by the JSC pursuant to this Agreement, and the Parties shall use best efforts to ensure that a meeting occurs within [***] period or as soon thereafter as practicable.

2.2.2 **Responsibilities.** The JSC shall oversee the collaborative relationship between Janssen and Vertex. To that end, the JSC shall also be responsible, without limitation, for the following:

2.2.2.1 oversight of the Development Program and Manufacturing activities undertaken with respect to any Product Candidate or Product hereunder;

2.2.2.2 reviewing matters referred to it by the other Committees (as defined below);

2.2.2.3 ensuring the exchange of relevant information and materials on a timely basis as required under this Agreement;

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2.2.2.4 reviewing and approving substantive amendments and updates to the Global Development Plan, and to any Additional Development Activities, consistent with this Agreement; and

2.2.2.5 such other responsibilities as may be assigned to the Joint Steering Committee pursuant to this Agreement or as may be agreed upon by the Parties in writing from time to time.

2.3 Committee Governance . In addition to the JSC, the Parties will participate in the collaboration created by this Agreement through a number of other committees, including a Joint Development Committee (“JDC”), a Joint Manufacturing Committee (“JMC”), a Joint Commercialization Committee (“JCC”) and a Joint Philanthropic Committee (“JPC”) (each, including the JSC, a “Committee” and together, the “Committees”). Each Committee shall meet [***] or as otherwise agreed by the Committee. Meetings will be held either in person or by teleconference or video conference, on such dates, and at such places and times, as provided herein or as the Parties shall agree. Meetings of each Committee that are held in person shall alternate between the offices of the Parties, or shall be conducted at such other place as the Parties may agree. Either Party may propose matters to the Committee Chair for inclusion on the Committee agenda for an upcoming meeting. Each Party shall initially have [***] members on each Committee, or such other number as the Parties may agree with respect to any particular Committee. Each Party will provide the other with a list of its initial members of each Committee [***] Each Party may thereafter replace any or all of its representatives at any time. A Committee meeting shall have a quorum if there are [***] of each of Janssen and Vertex in attendance. The Chair of each Committee shall be responsible for scheduling each meeting, and for issuing appropriate minutes of each meeting of that Committee within [***] of the date of such meeting. The minutes shall be considered as accepted by a Party if, [***], none of that Party’s Committee members have objected to the draft of such minutes in writing or by email to the Chair. [***] Where decisions are required of a Committee, the members of that Committee will attempt in good faith to reach consensus with respect to the matter at hand. If agreement cannot be reached after a good faith discussion among the members of [***] Any decision required or permitted to be taken by any Committee may be taken without a meeting in person taking place, if (i) a consent in writing, setting forth the decision so taken, is signed by all designated members of that Committee; or (ii) by mutual agreement of the Parties, the meeting is conducted by teleconference or videoconference; provided, however, that a Party that has requested a JSC meeting on [***] may not object to the conduct of that meeting by teleconference or videoconference. Each Party may, in its reasonable discretion, invite non-member representatives of such Party to attend meetings of a Committee; provided, however that (i) the attendance by any such non-member representative shall be reasonably acceptable to both Parties and (ii) the requirements of Section 11.2 of this Agreement with respect to obligations of confidentiality and non-use shall have been satisfied with respect to any such non-member representative. Each Party will be responsible for its representatives’ expenses incurred in attending Committee meetings.

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2.4 Alliance Managers . Promptly after the Effective Date, each Party may appoint an individual(s) to act as the alliance manager(s) for such Party (the “ Alliance Managers ”). Each Alliance Manager who is not otherwise a member shall thereafter be permitted to attend meetings of the Committees. The Alliance Managers, if appointed, shall be a significant point of contact for the Parties regarding the administration of this Agreement.

Article 3 - Global Development of Product Candidate

3.1 Current Status . Prior to the Effective Date, Vertex independently initiated Phase II Clinical Studies of VX-950 in North America and the EU, and has conducted or is conducting other clinical and non-clinical studies in support of the overall Development of VX-950. The Parties have agreed to continue the Development of Product Candidates under the Development Program and in accordance with the terms of this Agreement.

3.2 Development Program . Product Candidates will be Developed in the Territory and in North America pursuant to a Global Development Plan and in connection with any Additional Development Activities that may be undertaken by either Party. The Global Development Plan and any such Additional Development Activities together constitute the Development Program for a Product Candidate. The Global Development Plan identifies the type and timing of all planned Development activities to be undertaken in the Territory and in North America with the goal of securing Regulatory Approvals for the sale of Products in North America and the Territory with the Desired Label. The Global Development Plan also includes preliminary budgets covering all Development activities included in the Plan and allocates responsibilities for Development activities between the Parties.

3.3 Joint Development Committee . The Parties shall establish a JDC promptly after the Effective Date. The JDC shall be led by [***] . Subject to oversight by the JSC, the JDC shall coordinate the Development of Product Candidates with the objective of obtaining Regulatory Approvals in North America and the Territory as soon as practicable, for each Product Candidate. The JDC may establish sub teams having representatives from both Parties for important functional areas, including but not limited to clinical trial teams, regulatory teams and the like. Each Party will keep the JDC reasonably informed of its Development activities and its progress in executing its responsibilities under the Development Program. The JDC’s responsibilities shall include, without limitation, the following:

3.3.1 consider and discuss strategies for the Development of Product Candidates; and

3.3.2 at least [***] , review and discuss the Global Development Plan and related budgets and allocation of responsibilities between the Parties and, from time to time, present to the JSC for review and approval (i) proposed substantive amendments to the Global Development Plan in accordance with Section 3.4.3, and (ii) Additional Development Activities in accordance with Section 3.5.

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3.4 Global Development Plan .

3.4.1 Global Development . The Development of Product Candidates in North America and the Territory shall be governed by the Global Development Plan, and the Parties agree that all Development activities relating to Product Candidates shall be conducted in accordance with the Global Development Plan, except for those activities that are specifically included within Additional Development Activities undertaken in accordance with Section 3.5. Each Party will contribute to the operational execution of the Global Development Plan, and will make best use of each Party's established technological and process excellence for the optimal execution of the Global Development Plan. The JDC shall review the Global Development Plan not less frequently than [***] and shall develop detailed and specific Global Development Plan updates, which shall include annual Development budgets and allocation of responsibilities between the Parties, for each Calendar Year under the Global Development Plan. The JDC shall submit all such updates to the JSC for review and approval such that JSC preliminary approval of the plan and budget for any Calendar Year would occur [***]. Updates with the JSC's preliminary approval shall be submitted to each Party for its internal budgeting process with a target for final approval by the JSC [***], at which time any updates will be appended to the Global Development Plan.

3.4.2 Conduct of Activities under the Global Development Plan . Each Party will initially be responsible for conducting the Development activities assigned to it under the Global Development Plan. The allocation of responsibilities will be periodically reviewed by the JDC after the Effective Date, and may be supplemented or adjusted as determined by the JDC to be in the best interests of the collaboration, subject to review and approval by the JSC.

3.4.3 Amendments to the Global Development Plan . The JDC may develop and submit to the JSC from time to time proposed substantive amendments (which shall include necessary budget and allocation of responsibility updates) to the Global Development Plan as may be necessary or appropriate in its judgment to reflect changing circumstances. The JSC shall review any such proposed amendments presented by the JDC and may approve those proposed amendments and/or any other amendments proposed from time to time by members of the JDC and, upon approval of any such proposals by the JSC, the Global Development Plan shall be amended accordingly (provided that the JSC shall not be empowered to amend this Agreement). Amendments to the Global Development Plan, associated budgets and allocation of responsibilities shall not be effective without the approval of the JSC. Except as provided below, disagreements that cannot be resolved within the JDC concerning any proposed amendment shall be submitted for resolution to the JSC. Disagreements that cannot be resolved by the JSC shall be submitted for resolution as Unresolved Matters under the provisions of Sections 14.2 and 14.3. Notwithstanding the foregoing, mutual agreement among the Parties' representatives on the JSC shall be required for any proposed amendment to the Global Development Plan that would: (i) increase the aggregate amount of Global Development Costs [***] In the event that during any Calendar Year

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any Development activity expressly provided for in the approved Global Development Plan budget to be completed during that year is not completed, and therefore the full expense budgeted for that activity for that year is not incurred (to the extent not incurred, a “Non-Incurred Amount”), then to the extent that the incomplete activity is scheduled for the next succeeding Calendar Year, the Non-Incurred Amount shall be included in the Global Development Plan budget for the succeeding Calendar Year.

3.5 Additional Development Activities.

If the JDC is unable to reach agreement on the inclusion in the Global Development Plan of (i) additional Development activities relating to the Development of a Product Candidate that are not critical to obtaining Regulatory Approval for the Desired Label, or (ii) that constitute an Out-of-Budget Proposal (“Additional Development Activities”), then the Party wishing to conduct those activities may do so at its own expense, but only after review and approval of the Additional Development Activities with the JSC and, failing approval by the JSC, subject to the provisions of Sections 14.2 and 14.3 hereof. If the results of any such activities are included by the other Party in a filing with a Regulatory Authority (other than a required submission for safety purposes) to support a label claim or a change in an approved label in that other Party’s territory, then the other Party using that data [***]

3.5.1 [***]

[***]

[***]

3.6 Development Efforts; Manner of Performance; Reports

3.6.1 Standards for Conduct of Development Program . Each of Vertex and Janssen shall use Diligent Efforts to execute and to perform, or cause to be performed, the activities for which it is responsible under the Global Development Plan and to cooperate with and comply with all reasonable requests of the other Party in carrying out the Global Development Plan, in each case in good scientific manner and in compliance with applicable law, Good Clinical Practice and Good Laboratory Practice. Janssen shall use Diligent Efforts to seek Regulatory Approval to market the Product in the Territory including in each of the Key Countries. [***]

3.6.2 Development Progress Reports . The minutes of the Committees will serve as Development Progress Reports.

3.6.3 Coordination of Certain Activities . The Parties will use reasonable efforts to coordinate their Development activities to effect the most efficient and reasonable contacts and [***]

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3.6.4 Drug Supply for Non-Clinical and Clinical Trials . During the Development Program prior to the First Commercial Sale, Vertex shall use Diligent Efforts to supply clinical trial material of the Product Candidate for use in clinical studies conducted in accordance with the Global Development Plan and, if applicable, for Additional Development Activities. [***] With respect to supply for any Additional Development Activities prior to the First Commercial Sale, Vertex shall use Diligent Efforts to provide clinical trial material, subject to the primary commitment to supply clinical trial material for the Global Development Plan. Clinical trial material for Additional Development Activities conducted by Janssen shall be supplied to Janssen by Vertex [***], and otherwise as further described in a Development Supply Agreement to be executed by the Parties in advance of Janssen’s need for such clinical trial material. In the event that Janssen conducts one or more clinical trials under the Global Development Plan, or as Additional Development Activities, Vertex shall supply the Product Candidate in bulk Tablet form, and Janssen will be responsible for Packaging and distribution, unless Vertex, after discussion at the JMC, elects in its sole discretion to take on that responsibility. Notwithstanding the foregoing, in the event Janssen is unable to perform Packaging due to regulatory requirements, Vertex will use commercially reasonable efforts to perform Packaging, consistent with Vertex’s current capabilities, upon Janssen request.

3.7 Regulatory Submissions and Regulatory Approvals

3.7.1 Regulatory Submissions . Vertex shall be solely and exclusively responsible for obtaining all Regulatory Approvals for Products in North America and shall own all regulatory submissions, including all applications for and dossiers relating to Regulatory Approval made by or at its direction under this Agreement. Janssen shall be solely and exclusively responsible for obtaining Regulatory Approvals for Products in the countries in the Territory, and shall own all regulatory submissions directed toward Regulatory Approval, including all applications for and dossiers relating to Regulatory Approval made by or at its direction under this Agreement. All activities conducted by each Party in their territory in connection with the preparation, filing and prosecution of applications for Regulatory Approval of a Product Candidate or Product, or with respect to pricing or reimbursement activities, shall be at each Party’s sole cost and expense. Each Party shall provide the other Party documentation to support the regulatory submissions of the other Party.

3.7.2 Discussions with Regulatory Authorities . Each Party will have the right to participate as an observer in all material meetings and other material contacts with Regulatory Authorities pertaining to the Development of a Product Candidate for Regulatory

Approval in the territory of the other Party (excluding the Far East) to the extent not prohibited by law. Each Party shall provide the other Party with reasonable advance notice of all such meetings and other contacts, and to the extent practicable will supply advance copies of all related documents and other relevant information sufficiently in advance of any such meetings or other contacts as may provide the receiving Party with a reasonable opportunity to comment on the substance of the

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documents or correspondence. Material submissions made by a Party to, or correspondence with, Regulatory Authorities in such Party's territory [***], will be provided to the other Party sufficiently in advance to enable translation, if any such submissions or correspondence are not available in English. Janssen and Vertex shall discuss any material documents or other material correspondence [***] that either Party is planning to submit in connection with Regulatory Approvals, and each Party will consider the other Party's comments in good faith.

3.7.3 Labeling . The Parties will use reasonable efforts to establish and maintain a core label for each Product. [***] Each Party shall promptly provide to the other Party copies of all initially proposed labeling, Packaging and package inserts for a Product, in each case sufficiently in advance of submission to FDA and EMEA so that the other Party may review and have a reasonable opportunity to comment on the substance of such submissions. In addition, each Party shall promptly provide to the other Party copies of all initially proposed labeling, Packaging and package inserts for a Product that are materially different from the core label, in each case sufficiently in advance of submission to Regulatory Authorities, so that the other Party may review and have a reasonable opportunity to comment on the substance of such submissions. Thereafter, each Party will use reasonable efforts to provide the other Party with advance copies of any material changes to (i) the label, (ii) Packaging and (iii) package insert for review and comment. Vertex shall promptly provide to Janssen copies of any documents or correspondence pertaining to labeling received by Vertex or its Related Parties from the FDA. Janssen shall promptly provide to Vertex copies of any documents or correspondence pertaining to labeling received by Janssen or its Related Parties from EMEA or Regulatory Authorities in the Major Market Countries, and in addition, any such documents or correspondence, irrespective of the country to which the documents or correspondence relate, which address material issues concerning the label. Upon Vertex's reasonable request, Janssen shall provide Vertex with any English translations of the documents and correspondence described in the preceding sentence that are produced for Janssen's own use. Neither Party shall have the right to approve the proposed labeling for the Product in any country in the other Party's territory. However, each Party shall have the right to object to the labeling to be initially submitted (or resubmitted following receipt of comments from, or negotiations with, Regulatory Authorities) for the Product in any country in the other Party's territory or to any proposed variations or modifications to any labeling that has received Regulatory Approval, but in each case solely on the grounds that such labeling could in such Party's reasonable judgment have a Material Adverse Effect; and provided, further, that such Party shall not be entitled to object to any variations or modifications to any labeling required by law or by any Regulatory Authority. Any objection or response to the other Party's label or proposed label shall be made promptly so as to not delay the submission or approval of the label. Any such objection shall be submitted in writing to the JSC, with a full explanation of the concerns underlying the objection, and the matter shall be addressed by the JSC at a meeting called for that purpose as soon as reasonably practicable. Failing agreement by the JSC, the objection shall be referred for resolution under Section 14.2 hereof.

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3.7.4 Right to Cross-Reference . Each Party shall have the right to cross-reference and make any other use of the other Party's NDAs/MAAs and INDs/CTAs for the Product that it would have if it were the owner [***] including without limitation access to all data Controlled by the other Party and contained or referenced in such NDAs/MAAs and INDs/CTAs, in each case as may be reasonably necessary to enable such Party to Develop, Manufacture or Commercialize Products as permitted under this Agreement. In addition, each Party shall have the right to cross-reference the other Party's drug master file (" DMF ") in connection with the performance of its obligations under this Agreement.

3.7.5 [***] . Subject to applicable law, Janssen shall provide Vertex at its request with all material information relating to Janssen's [***] in the EU and material information that serves as the basis for [***] in the EU.

Article 4 -Manufacture and Supply

4.1 General Background. In general, the Parties intend that the provision of supply of raw materials, Intermediates, API and Product for both clinical and commercial purposes in the Territory will occur in accordance with the terms of this Agreement as follows:

- (a) **Clinical.** Vertex will be responsible for providing Product Candidate supply under the Global Development Plan and, subject to availability, for Additional Development Activities pursuant to the provisions of Section 3.6.4 .
- (b) **Commercial.** The Parties intend that (i) Janssen will be responsible for the Manufacture of Product for Commercialization in the Territory including but not limited to Intermediates, API, and Product, and (ii) Vertex will be responsible for the Manufacture of Product for Commercialization outside the Territory, provided that Janssen will, as a secondary source for Vertex, also be responsible for the Manufacture of Product for Commercialization by Vertex outside the Territory as described in Section 4.5(d).
- (c) **Technical Transfer.** Accordingly, the Parties will commence technical transfer activities [***] with the goal of enabling Janssen to supply Product for Commercialization in the Territory at Product launch and, as soon as practicable, to serve as a secondary source for Product for Commercialization outside the Territory as described in Section 4.5(d). In the event the Joint Manufacturing Committee determines that Janssen's progress under the Technical Transfer Plan (as defined in Section 4.5(b)) [***] Vertex shall [***] to supply Product to Janssen in accordance with the terms of the Supply Agreement (as defined in Section 4.5(a)).
- (d) [***]

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- 4.2 Joint Manufacturing Committee** . Promptly after the Effective Date, the Parties shall establish a Joint Manufacturing Committee (the “Joint Manufacturing Committee” or “JMC”) to oversee Manufacturing activities related to the Territory, subject to the terms of this Agreement and the oversight of the JSC. The JMC shall be responsible, without limitation, for the following:
- 4.2.1** consider and discuss the strategy for the Manufacture of the Product and Product Candidates in the Territory with the goal of synchronizing supply and demand; and
 - 4.2.2** review and approve the Technical Transfer Plan described in Section 4.5(b), and monitor Janssen progress under such Technical Transfer Plan.
- 4.3 Manufacturing Director** . Promptly following the Effective Date, each Party shall appoint one of its representatives to the JMC to direct all matters related to Manufacturing within its organization and to coordinate with the appointed representatives’ counterpart designated by the other Party.
- 4.4 Initial Forecast** . [***] As a necessary component of estimating supply chain capacity requirements, the Parties will deliver to each other [***] forecast for Product [***] which will also include [***]
- 4.5 Supply of Product.**
- (a) Supply Agreement** . Within [***] of the Effective Date, Janssen and Vertex will negotiate [***] , and separately enter into a supply agreement for the supply by Vertex, [***] , of Janssen’s requirements of Product for distribution and sale in the Territory (the “Supply Agreement”). The Supply Agreement shall include the Supply Agreement Key Elements attached hereto as Exhibit 4.5(a) and such customary representations, warranties, covenants and conditions as are necessary or appropriate for transactions of this type, not inconsistent with the terms and conditions hereof; [***] Vertex will supply Product to Janssen [***] In the event Regulatory Authorities in the Territory require different specifications, [***]
 - (b) Technical Transfer to Janssen.** Within [***] Janssen will propose to the JMC a plan for establishing manufacturing capabilities necessary for Janssen to manufacture the Product for the Territory and for use outside the Territory as a secondary source for Vertex (the “Technical Transfer Plan”). Following approval of the Technical Transfer Plan by the JMC, Janssen will commence and use Diligent Efforts to perform technical transfer activities and achieve its supply and secondary source obligations in accordance with such plan, the capacity expectations described in section 4.5(d) below and any applicable supply agreement. Janssen will provide Vertex with all documentation that is required and useful to effect regulatory filings necessary for regulatory approval of secondary source manufacturing facilities. Vertex will assist with such technical transfer by providing both technical documentation and FTE resources as may be reasonably requested to inform Janssen about the manufacturing process, subject to the understanding that Vertex will provide [***] at the initiation of the technical transfer for

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each discrete aspect of the manufacturing process: [***] Following the initiation of the technical transfer, individuals having the expertise shared with Janssen at the initiation of the technical transfer (as provided above) will be available to participate in [***] project teleconferences with Janssen during the execution of the Technical Transfer Plan. If requested by Janssen and agreed by Vertex's Third Party suppliers, Vertex will use reasonable efforts [***] Notwithstanding the foregoing, Janssen will retain sole responsibility for the implementation and progress of the Technical Transfer Plan and for meeting its needs for Product Supply (either through its own Manufacturing activities or through the supply agreement) at launch and thereafter.

(c) **Sale of Intermediates.** [***] , and subject to the terms of the Supply Agreement, Vertex will use Diligent Efforts to supply Janssen with the raw materials, Intermediates required for its manufacture of the API to be converted into Product for Commercialization in the Territory and, as a secondary source to Vertex, for Product to be sold outside the Territory. [***]

(d) **Notice of Establishment of Supply Capability; Secondary Source Capacity.** Janssen shall notify Vertex promptly following its establishment of supply capability for Manufacture of Product for Commercialization in the Territory. [***] following delivery of such notice, the Parties will enter into a supply agreement for Janssen to be a secondary supplier, which supply agreement shall include usual and customary terms including, but not limited to, provisions for good faith forecasts, binding purchase orders for periodic orders by Vertex from Janssen, purchase price, and term, for supply of [***] provided the purchase price shall be [***]

In addition, Janssen agrees to use [***] to supply additional quantities of [***] if requested by Vertex, provided, however, [***]

(e) **Third Party Agreements.** Vertex will provide Janssen with copies of draft Third Party manufacturer agreements for the commercial supply of VX-950 and will consider in good faith Janssen's comments provided [***] .

4.6 Packaging . Janssen will be responsible for Packaging of Products for commercial sale in the Territory.

4.7 Support for Establishment of Supply Capabilities . [***] Vertex will invoice Janssen for costs incurred under Section 4.7 as they occur and Janssen will pay such invoice within [***] Vertex may sell Product from its inventory following Regulatory Approval of the Product in Vertex's territory and, [***]

Article 5 - Commercialization in the Territory

5.1 Janssen Commercialization Efforts. Janssen shall warehouse and distribute the Product in the Territory and shall be responsible for recording sales and handling all aspects of Product order processing, invoicing, collection, inventory and receivables in the Territory.

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In this work and in all other aspects of Commercialization of the Product in the Territory, Janssen shall use Diligent Efforts, including without limitation by [***] Except relating to the philanthropic and access programs and activities pursuant to Article 6, Janssen will use Diligent Efforts to maximize Net Sales of Products in the Territory through its commercial marketing, pricing and contracting strategies [***] Janssen shall bear all of its own costs and expenses of Commercializing the Product in the Territory.

5.2 Joint Commercialization Committee . Promptly after the Effective Date, the Parties shall establish a Joint Commercialization Committee (the “Joint Commercialization Committee” or “JCC”). The JCC shall be led by co-chairs, one of which shall be selected by Vertex and one of which shall be selected by Janssen.

5.2.1 Responsibilities . The JCC shall be responsible for the following:

- 5.2.1.1** use reasonable efforts to establish a global brand for the Product including but not limited to, establishing overall strategic objectives for the Product;
- 5.2.1.2** review and discuss the Territory Commercialization Plan and the North American Commercialization Plan; and
- 5.2.1.3** discuss commercial activities that may benefit from joint involvement or coordination, including but not limited to [***] other matters of mutual interest.

5.3 Commercialization Plans . The JCC will review and discuss the Territory Commercialization Plan and the North American Commercialization Plan, each of which will be provided to the JCC by Janssen or Vertex, respectively, no later than [***] prior to the projected commercial launch for the Product in the United States (with respect to the North American Commercialization Plan) or the European Union (with respect to the Territory Commercialization Plan). [***] The responsible Party will also provide to the JCC, for review and discussion, any subsequent material amendments to the most recent Commercialization Plan that it provided to the JCC and in any event shall submit an updated plan on an annual basis. [***] prior to the projected commercial launch for the Product in either the United States or the European Union, the JCC will consider plans for sharing certain global Commercialization activities (i.e., activities that benefit the Product in both the Vertex’ and Janssen’s territories, including without limitation such activities that relate to [***] and the appropriate allocation of responsibilities and budget for such activities. Any such plan (including the allocation of responsibilities and budget) recommended by the JCC will be referred to the JSC for approval and if approved, will be reviewed and updated annually thereafter by the JSC upon referral from the JCC. The Territory Commercialization Plan will contain the annual Commercialization plans and budgets for [***] with sufficient detail with respect to Commercialization, including but not limited to details [***] to enable the JCC to conduct a meaningful review of such plans. Comparable information will be provided for the Territory as a whole and on a regional basis. Amendments and updates to the Territory Commercialization Plan and

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particularly the Commercialization plans for [***] shall not be effective without review and discussion by the JCC.

Notwithstanding the foregoing, Janssen shall be solely responsible for all decisions regarding the prices charged for the Product in the Territory, as well as discounts, rebates and all other deductions from Net Sales allowed under Section 1.77.

5.4 Scientific Meetings; [***] Commencing [***], the Parties will discuss the scientific meetings inside and outside the Territory to which each Party intends to send a representative(s) during the balance of 2006 and for the following year, and will periodically review their respective plan in this regard with each other. The discussions will be for the purpose of coordinating efforts in connection with [***] in connection with supporting the worldwide exchange of scientific information. [***]

5.5 Advertising and Promotional Materials.

(a) Janssen shall develop relevant educational, sales, promotion and advertising materials relating to the Product (“Territory Product Materials”), for use in the Territory, that shall be consistent with the Territory Commercialization Plan and compliant with applicable law and the provisions of applicable Regulatory Approvals. Copies of all Territory Product Materials used in the Territory will be archived by Janssen in accordance with applicable law. Upon Vertex’s request, Janssen shall provide copies of the material core Territory Product Materials for the Key Countries to Vertex for its review and comment prior to their first use. Moreover, upon request, Janssen shall provide copies of any other Territory Product Materials for other countries in the Territory to Vertex for its review and comment. Janssen will provide Vertex with any English translations, if available, of such Territory Product Materials that are produced for its own use. Janssen will consider in good faith any comments Vertex may have with respect to such Territory Product Materials. Upon Janssen’s request, Vertex shall provide Janssen with copies of the material core educational, sales, promotion and advertising materials relating to the Product in North America (“North American Product Material”), for review and comment prior to their use. Vertex will consider in good faith any comments Janssen may have with respect to such North American Product Material. Requests for North American Product Material and Territory Product Materials shall be made through a member of the JCC or his or her designee.

(b) Subject to any limitations imposed by applicable law, all Territory Product Materials and all documentary information and oral presentations, whether in hard-copy written, electronic or other media form regarding the education, marketing and promotion for the Product in countries of the Territory shall acknowledge the Parties’ license arrangement and shall display the Janssen or Janssen Affiliate and Vertex names and logos with equal prominence.

(c) In the event that Janssen uses, in a majority of the Major Market Countries in the Territory, the same Trademark for the Product used by Vertex in the United States, at Vertex’s option the Parties will coordinate the establishment, content, operation, and

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maintenance of any site or domain on the internet which incorporates the Trademark, and the related annual cost [***] The costs incurred by Vertex in the search for and selection of the Trademark will be shared in the same proportion.

(d) Where not prohibited by law or regulation, and subject to any required Regulatory Approval, which Janssen shall use diligent efforts to obtain, Vertex's name and logo will be carried on all Product packaging, package inserts, labels and containers, and on all printed, electronic and digital material related thereto (including educational materials and advertisements), with a prominence substantially equivalent to that of Janssen, or the Janssen Affiliate that is the most prominent name listed on any such material.

5.6 Referral of Orders; Returns . If Vertex receives any orders for the Product in the Territory, it shall refer such orders to Janssen. If Janssen receives any orders for the Product outside the Territory, it shall refer such orders to Vertex. Janssen shall be solely responsible for handling all returns of the Product sold in the Territory. If Product sold in the Territory is returned to Vertex, Vertex shall promptly ship such Product to a facility designated by Janssen. If Product sold in North America is returned to Janssen, Janssen shall promptly ship such Product to a facility designated by Vertex, at Vertex's expense.

5.7 Adverse Event and Product Complaint Reporting Procedures . Each Party will (i) provide the other Party with all Product complaints, adverse event information, and safety data in its control necessary or desirable for the other Party to comply with all applicable law with respect to the Product and (ii) report and provide such information to the other Party in such a manner and time so as to enable the other Party to comply with all applicable law. Vertex shall maintain a global adverse event database for the Product and shall generate adverse event reports for Janssen's use in the Territory. Janssen shall have access to all data in the global adverse event database. Janssen shall be responsible for submitting adverse events reports to the applicable Regulatory Authorities in the Territory. The Parties will enter into a Pharmacovigilance Agreement along with any other sublicensees of Vertex and Janssen (the "Pharmacovigilance Agreement") within [***], setting forth the product complaint procedures to which each Party will adhere; provided that in any event, the Pharmacovigilance Agreement will be in place prior to (a) the earlier of initiation by Janssen of any activities under the Global Development Plan, or any Additional Development Activities, or (b) the submission by Janssen of any applications for Regulatory Approval of the Product in the Territory. The costs and expenses of maintaining the global adverse event database shall be borne [***] Notwithstanding the foregoing, [***] the Parties will enter into a new Pharmacovigilance Agreement and Vertex and its sublicensees will have benefits and relevant obligations substantially similar to those which Janssen had in the initial Pharmacovigilance Agreement. The foregoing shall not be interpreted as requiring either Vertex or Janssen, respectively, to be responsible for the cost of maintenance of the global adverse event database, except as otherwise required by law, beyond the point at which Vertex or Janssen, respectively, terminates Development or Commercialization of Products under this Agreement.

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[***] of this Agreement, the Parties shall meet to establish a safety oversight working group (the “Safety Oversight Working Group”) composed of members of both Parties, which during the [***] and as otherwise provided in the Pharmacovigilance Agreement, shall discuss processes and procedures for sharing information needed to support each Party’s respective regulatory responsibilities and to comply with applicable regulatory pharmacovigilance requirements. Any such procedures shall not be construed to restrict either Party’s ability to take action that it deems to be appropriate or required of it under the applicable regulatory requirements, but when permitted by applicable laws and regulations, the Parties shall consult with each other before taking such action.

5.8 Commercial Information . In addition to royalty reports required pursuant to Section 9.6, Janssen will provide Vertex, on an annual basis as part of the Territory Commercialization Plan, with information relating to Sales Call metrics on a country-by-country basis in the [***] on a country-by-country basis for the [***] .

5.9 [***]

5.10 Recalls, Market Withdrawals or Corrective Actions.

5.10.1 In the Territory . If any Regulatory Authority issues or requests a recall or takes a similar action in connection with the Product in the Territory, or if either Party determines that an event, incident or circumstance has occurred that may result in the need for a recall or market withdrawal in the Territory, the Party notified of such recall or similar action, or the Party that desires such recall or similar action, shall [***] advise the other Party thereof by telephone or facsimile. Janssen, in consultation with Vertex, shall decide whether to conduct a recall in the Territory (except in the case of a government mandated recall, when Janssen may act without such advance notice but shall notify Vertex as soon as possible) and the manner in which any such recall shall be conducted. Vertex will make available to Janssen, upon request, all pertinent records within Vertex’s control that Janssen may reasonably request to assist Janssen in effecting any recall. Janssen shall bear the expense of any such recall in the Territory, subject to the terms of the Supply Agreement.

5.10.2 Outside the Territory . In the event that any Regulatory Authority issues or requests a recall or takes a similar action in connection with the Product in any country outside the Territory, or in the event either Party determines that an event, incident or circumstance has occurred that may result in the need for a recall or market withdrawal in any country outside the Territory, the Party notified of such recall or similar action, or the Party that desires such recall or similar action, shall [***] , advise the other Party thereof by telephone or facsimile. Vertex and/or its Related Parties, in consultation with Janssen, shall decide whether to conduct a recall in any country outside the Territory and the manner in which any such recall shall be conducted. Janssen will make available to Vertex, upon request, all pertinent records within Janssen’s control that Vertex may reasonably request to assist Vertex in effecting any recall. Vertex and/or its Related Parties shall bear the expense of any such recall.

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5.11 Medical Inquiries.

5.11.1 In the Territory . After the First Commercial Sale, Janssen shall handle all medical questions or inquiries from members of the medical profession in the Territory regarding the Product [***] Vertex shall, and shall cause its medical affairs and/or sales department to, refer to Janssen all such questions and inquiries within [***] of receipt. In no event will Vertex or its Sales Representatives or MSLs respond to any such medical question or inquiry. Notwithstanding the foregoing, [***]

5.11.2 Outside the Territory . Vertex shall handle all medical questions or inquiries from members of the medical profession outside the Territory regarding the Product. Janssen shall, and shall cause its medical affairs and/or sales department to refer to Vertex all such questions and inquiries within [***] of receipt. In no event will Janssen or its Sales Representatives or MSLs respond to any such medical question or inquiry.

Article 6 -Philanthropic Program.

Vertex and Janssen along with their respective Affiliates share the goal of promoting the diagnosis, prevention, treatment and cure of HCV Infection worldwide. In addition to Developing and Commercializing the Product in their respective territories, the Parties intend to engage in worldwide philanthropic activities directed toward this goal. Accordingly, the Parties agree that, [***] , each Party will set aside an amount [***] to apply in furtherance of such philanthropic objectives (the “Philanthropic Funds”). Each Party shall make its contribution no later than [***] . The Philanthropic Funds will be provided by each Party in any one of a variety of approved forms at such Party’s election, such as [***] Also as part of this philanthropic program, the Parties shall consider in good faith activities and programs to increase the access to the Product, especially in countries identified by the World Health Organization as developing countries. In addition, as part of the Philanthropic program, Janssen may [***] The disposition of the Philanthropic Funds shall be determined by consensus of the members of a Joint Philanthropic Committee (“JPC”), with equal representation from each Party; provided, however, that the Philanthropic Funds shall be allocated in such a way as to maximally benefit the causes of the diagnosis, prevention, treatment and cure of HCV Infection. If the JPC is unable to reach consensus, either Party may refer the matter to the Executive Officers in accordance with Section 14.2. Each Party will afford equal recognition to the other Party in any public description by that Party of activities under this Article 6.

Article 7 -License Grants

- 7.1 Development License** . Vertex and its Affiliates hereby grant to Janssen a co-exclusive (with Vertex) right and license under Vertex Patent Rights and Vertex's rights under Joint Patent Rights, to Develop Product Candidates and Products in the Territory in the Field, provided however, that such license shall not include a license to Vertex Patent Rights resulting from inventions conceived or reduced to practice as a result of Additional Development Activities, if Janssen elected not to participate in those activities, unless and

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until Janssen has paid the amounts specified in Section 3.5 hereof with respect to those Additional Development Activities.

- 7.2 Commercialization License** . Vertex and its Affiliates hereby grant to Janssen an exclusive right and license under Vertex Patent Rights and Vertex's rights under Joint Patent Rights, to Commercialize Product Candidates and Products in the Territory in the Field, provided however, that such license shall not include a license to Vertex Patent Rights resulting from inventions conceived or reduced to practice as a result of Additional Development Activities, if Janssen elected not to participate in those activities, unless and until Janssen has paid the amounts specified in Section 3.5 hereof with respect to those Additional Development Activities.
- 7.3 Know-How License** . Vertex and its Affiliates hereby grant to Janssen an exclusive license in the Field in the Territory under all Vertex Know-How to the extent that it relates exclusively to Compounds, Product Candidates or Products, solely to discharge Janssen's obligations and exercise its rights under this Agreement, provided however, that such license shall not include a license to Vertex Know-How resulting from inventions conceived or reduced to practice as a result of Additional Development Activities, if Janssen elected not to participate in those activities, unless and until Janssen has paid the amounts specified in Section 3.5 hereof with respect to those Additional Development Activities.
- 7.4 Licenses from Janssen** . Janssen and its Affiliates hereby grant to Vertex a non-exclusive, royalty-free license in the Field under all Janssen Patent Rights, Janssen Know-How and Janssen's rights under Joint Patent Rights, solely for the purpose of Developing or Manufacturing Product Candidates or Products worldwide, and an exclusive, royalty-free license in the Field under all Janssen Patent Rights, Janssen Know-How and Janssen's rights under Joint Patent Rights, for Commercializing Product Candidates and/or Products outside the Territory, provided however, that such license shall not include a license to Janssen Patent Rights or Know-How resulting from inventions conceived or reduced to practice as a result of Additional Development Activities, if Vertex elected not to participate in those activities, unless and until Vertex has paid the amounts specified in Section 3.5 hereof with respect to those Additional Development Activities.
- 7.5 Manufacturing License** . Vertex and its Affiliates hereby grant to Janssen an exclusive license in the Field in the Territory to Manufacture Product Candidates and Products for Commercial use in the Territory, and a co-exclusive (with Vertex) right and license to Manufacture Product Candidates and Products for purposes of exercising its rights under the Development License granted under Section 7.1 above, in each case under Vertex Patent Rights, Vertex Know-How and Vertex's right under Joint Patent Rights. Any license provided to Janssen under the Supply Agreement shall be incremental to the license right granted in this section.
- 7.6 License of Trademarks** . Prior to Commercialization of a Product, the Parties shall enter into a trademark licensing agreement under which Vertex and its Affiliates grant to Janssen

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a [***] license during the term of the Agreement to use (i) logos chosen and owned by Vertex (the “Vertex Logo”) and (ii) the Trademarks Controlled by Vertex, on labeling, package inserts, monographs and packaging materials for the Product, Product Materials and samples, and other materials used in connection with the performance of this Agreement during its term. Janssen shall have no rights under this Agreement in or to the Vertex Logo, the Vertex Trademarks or the goodwill pertaining thereto except as specifically provided in the trademark licensing agreement. Janssen agrees that upon termination or expiration of this Agreement, it will discontinue all use of the Vertex Logo and the Vertex Trademarks, provided, however, Janssen shall have the right to sell off any inventory of Product containing Vertex Logo or Vertex Trademarks in accordance with the terms of this Agreement.

7.7 Right to Sublicense . Each Party shall have the right to grant sublicenses under the rights and licenses granted to it under Sections 7.1, 7.2, 7.3, 7.4 and 7.5 of this Agreement, provided that any such sublicense obliges the sublicensee to comply with all relevant terms of this Agreement and that each Party remains liable to the other for all material acts and omissions of any such sublicensee.

Notwithstanding the foregoing, if Janssen wishes to grant a sublicense to a Third Party of its Development or Commercialization rights in [***] For the avoidance of doubt, Janssen shall not be required to seek the consent of Vertex in respect of sublicenses granted to its Affiliates.

7.8 Vertex Retained Rights. Notwithstanding the foregoing, Vertex shall retain rights under the Vertex Patent Rights and the Joint Patent Rights to the extent necessary or useful to discharge its obligations and exercise its rights under this Agreement, including but not limited to performing all activities (directly or with Related Parties) included in the Global Development Plan from time to time.

7.9 No Implied Licenses . Except as specifically set forth in this Agreement, neither Party shall acquire any license or other intellectual property interest, by implication or otherwise, in any Information disclosed to it under this Agreement or under any patents or patent applications owned or Controlled by the other Party or its Affiliates.

7.10 [***]

7.11 [***]

Article 8 -

(This Article is intentionally left blank).

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Article 9 -Financial Provisions

9.1 Upfront License Fee . In consideration of the licenses granted pursuant to Article 7, Janssen shall pay to Vertex a one-time non-refundable, non-creditable payment of One Hundred Sixty Five Million Dollars (US \$165,000,000) within [***] the Effective Date.

9.2 Milestones

9.2.1 Milestone Payment . In further consideration of the licenses granted pursuant to Article 7, Janssen shall also pay each of the amounts set forth in the table below (each, a “Milestone Payment”) if and when the corresponding development milestone event (each, a “Milestone Event”) is achieved.

	Milestone Event	Milestone Amount (USD)
1	Of the [***] patients in the PROVE 1 trial on VX-950 treatment [***] RNA levels of less than 10 IU/ml in [***] of patients after 12 weeks of treatment with VX-950 + PegIFN + RBV	\$15.0 M(*)
2	On Initiation of the first Phase II Clinical Trial [***] administered to Non-Responder patients	\$15.0 M
3	On Initiation of the first Phase II Clinical Trial in Genotype 2 or Genotype 3 patients.	\$10.0 M
4	[***]	\$15.0 M
5	On Initiation of the first Pivotal Clinical Trial [***]	\$45.0 M
6	On acceptance (for filing) of MAA by EMEA	\$50.0 M
7	Regulatory Approval by the EMEA for Genotype 1 patients	\$50.0 M
8	[***]	[***]
9	[***] EU Country.	\$100.0 M
10	[***] EU Country.	\$50.0 M

(*) “M” stands for million.

[***]

9.2.2 Each Milestone Payment shall be payable only once upon the initial achievement of the associated Milestone Event. Vertex will invoice Janssen upon the occurrence of each of the Milestone Events [***], and the invoiced amount shall be payable within [***] of receipt of invoice. Janssen will notify Vertex in writing not later than [***] after the occurrence (or deemed occurrence) of each of the Development Milestone Events [***], and shall pay the appropriate Milestone Payment within [***] of receipt of an invoice thereafter from Vertex.

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9.3 Development Cost Reimbursement . Janssen will pay to Vertex fifty (50%) percent of the Global Development Costs. Not later than [***] after the end of each calendar quarter, Vertex will submit to Janssen a summary of Global Development Costs for the Calendar Quarter just ended, including a brief description of the aggregate internal and external costs and an allocation of the Global Development Costs across various Development activities. With the summary, Vertex will include an invoice for fifty (50%) percent of the reported Global Development Costs, which invoice shall be due and payable by Janssen [***] If Janssen has responsibility for Development activities under the Global Development Plan, Janssen will provide to Vertex, also on a quarterly basis and with a description as set forth above, a summary of the Janssen’s Global Development Costs under the Global Development Plan for the preceding quarter. Janssen may apply fifty (50%) percent of any such Global Development Costs appropriately incurred and disclosed hereunder against any unpaid amounts otherwise due to Vertex on account of Global Development Costs previously incurred by Vertex, and if the amount of any such offset exceeds the amount otherwise due and payable to Vertex, [***] The books and records of each Party and any of that Party’s Related Parties relating to Global Development Costs to be charged to the other Party hereunder will be subject to inspection as provided below [***] upon reasonable notice from the Party charged to the charging Party, for the purpose of verifying the accuracy of the summary of submitted Global Development Costs. Those records will be made available during normal business hours and will include all appropriate supporting information, such as a record of time expended on Development activities and invoices received covering all Third Party costs included in any summary of Global Development Costs submitted by the Party being audited. The inspection shall be conducted by an independent certified public accounting firm of nationally recognized standing, selected by (and at the expense of) the Party exercising its inspection right and reasonably acceptable to the Party being audited. The accounting firm conducting any such inspection shall only disclose to the Party exercising its inspection right whether the summary of Global Development Costs being audited is accurate, and if not, by what aggregate amount the summary is inaccurate. The books and records of each Party pertaining to Global Development Costs shall be retained by such Party for a period of [***] The summary information provided by either Party under the reporting provisions set forth above and any additional information disclosed by that Party upon audit shall be Information of the Party providing the information and subject to the confidentiality and non-use obligations of Section 11.1.

9.4 Royalties .

9.4.1 Royalties Payable By Janssen . In further consideration of the licenses granted pursuant to Article 7, Janssen shall pay to Vertex royalties on cumulative Net Sales of Products in the Territory as set out in this Section 9.4. The royalty rate payable shall be determined [***] :

[***]

[***]

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Royalties on sales of Products, at the royalty rates determined as set forth above with reference to annual aggregate Net Sales in the Territory, shall be payable on a country-by-country basis until, with respect to a particular country, the [***] expiration of the last-to-expire Valid Patent Claim in effect in that country claiming the Manufacture, use, sale or importation of a Product [***] For purposes of determining aggregate Calendar Year Net Sales under this Section 9.4.1 for any Calendar Year, [***].

9.4.2 Unlicensed Competition. Notwithstanding Section 9.4.1, if a Third Party sells a pharmaceutical product in any country that is a “Generic Version” of a Product being sold in that country (the generic version, a “Third Party Product”), then [***] For purposes of this subsection 9.4.2, a “Generic Version” of a product is [***] This Section 9.4.2 shall not be applicable to any product being sold by a Third Party to which Janssen has granted a sublicense hereunder. The [***] provided in this Section 9.4.2 shall not be applied to any Net Sales in respect of which a royalty report has already been provided pursuant to Section 9.7 prior to receipt by Vertex from Janssen of written notice that sales of a Generic Version of a Product covered by that royalty report [***]

9.5 Third Party Licenses . Janssen shall be responsible for [***] of any royalties, or other amounts relating to intellectual property rights, payable on account of Products sold in the Territory, including without limitation, royalties due under any of the Existing Third Party Agreements. Neither Party shall enter into any agreement with a Third Party, without the other Party’s written consent, obligating the other Party to pay royalties or other amounts relating to the Third Party’s intellectual property rights in connection with the Development, Manufacture or Commercialization by that other Party of Product Candidate or Products in that other Party’s territory. If Vertex pays any such royalties or other payments otherwise the responsibility of Janssen, those payments will be deemed to have been made on behalf of Janssen and Janssen shall promptly reimburse Vertex for any such payments [***] days of receipt of an invoice therefor from Vertex. The Parties shall establish such procedures as are reasonably necessary to permit them to reconcile Vertex’s actual payments pursuant to the foregoing with Janssen’s payments to Vertex or to any Third Party under this Section 9.5.

9.6 Reports; Payment of Royalty . During the term of this Agreement following the First Commercial Sale of a Product, Janssen shall furnish to Vertex [***], at the end of each [***], showing (i) the Net Sales of Products in each country in the Territory during the reporting period, and any permitted deductions from gross sales taken to arrive at the Net Sales calculation as set forth in Section 1.77 of this Agreement; (ii) the royalties payable

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under this Agreement on account of those Net Sales and the basis for calculating those royalties; (iii) the exchange rates and other methodology used in converting Net Sales into U.S. dollars, from the currencies in which sales were made in order to determine the appropriate royalty tier; and (iv) dispositions of Products other than pursuant to sale for cash. Net Sales in countries invoiced in currency other than U.S. Dollars shall be translated to U.S. Dollars using Janssen's then-current standard exchange rate methodology, fairly applied, for the translation of foreign currency into U.S. dollars, as employed on a consistent basis throughout Janssen's operations and disclosed to Vertex in advance. Should Janssen change its foreign currency translation methodology, the new methodology will be disclosed in writing to Vertex. [***] Royalties shown to have accrued by each [***] royalty report shall be due and payable to Vertex no later than the [***]. Janssen shall keep complete and accurate records in sufficient detail to enable the royalties payable hereunder to be determined and the information provided hereunder to be verified by Vertex's accounting firm pursuant to Section 9.7.

9.7 Audits . Upon the written request of Vertex, with [***] prior written notice to Janssen, [***], Janssen shall permit an independent certified public accounting firm of nationally recognized standing selected by Vertex and reasonably acceptable to Janssen, [***], to have access during normal business hours to such of the records of Janssen and its Affiliates as may be reasonably necessary to verify the accuracy of the royalty reports hereunder for any [***]. Those records shall include, without limitation, gross sales of each Product or Product Candidate on a country-by-country basis, as well as all deductions taken from gross sales in that country to arrive at Net Sales in that country. The accounting firm shall disclose to Vertex only whether the royalty reports are correct or incorrect and the specific details concerning any discrepancies.

If such independent accountant's review of Janssen's royalty reports shows an underpayment, Janssen shall remit or cause its Related Parties to remit to Vertex within [***] after Janssen's receipt of such report: (i) the amount of such underpayment plus interest as determined under Section 9.10 below, and (ii) if such underpayment exceeds [***] of the total amount owed for the period being audited, the reasonable and necessary fees and expenses of the independent accountant performing the audit. If such underpayment does not exceed [***], the fees and expenses of the independent accountant performing any such audit shall be paid by Vertex. [***] Upon prior written notice to Janssen as provided above, Vertex shall have a further right, exercisable not more frequently than once [***], to audit Net Sales, deductions taken from gross sales, and royalties earned by Vertex in any country in which a prior audit has shown an understatement of royalties due of at least [***].

Janssen shall include in each sublicense granted by it pursuant to this Agreement a provision requiring the sublicensee to make reports to Janssen, to keep and maintain records of sales made pursuant to such sublicense and to grant access to such records by Vertex's independent accountant to the same extent required of Janssen under this Agreement.

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Upon the expiration of [***] the calculation of royalties payable with respect to such year shall be binding and conclusive upon the Parties, and Janssen and its Related Parties shall be released from any liability or accountability with respect to royalties for such Calendar Year.

Vertex shall treat all financial Information subject to review under this Section 9.7 or under any sublicense agreement in accordance with the confidentiality and non-use provisions of this Agreement, and shall cause its accounting firm to enter into an acceptable confidentiality agreement with Janssen and/or its Related Parties obligating it to retain all such Information in confidence pursuant to such confidentiality agreement.

9.8 Payments . All payments to be made by Janssen to Vertex under this Agreement shall be made in U.S. dollars and shall be paid by bank wire transfer in immediately available funds to such bank account in the United States or elsewhere as may be designated in writing by Vertex from time to time.

9.9 Income Tax Withholding .

(a) Janssen will make all payments to Vertex under this Agreement without deduction or withholding for taxes except to the extent that any such deduction or withholding is required by law in effect at the time of payment, and Janssen has notified Vertex of any such deduction or withholding in the royalty report.

(b) Any tax required to be withheld on amounts payable under this Agreement will promptly be paid by Janssen on behalf of Vertex to the appropriate governmental authority, and Janssen will furnish Vertex with proof of payment of such tax. Any such tax required to be withheld will be an expense of and borne by Vertex.

(c) Janssen and Vertex will cooperate with respect to all documentation required by any taxing authority or reasonably requested by Janssen or Vertex to secure a reduction in the rate of applicable withholding taxes.

(d) If Janssen had a duty to withhold taxes in connection with any payment it made to Vertex under this Agreement but Janssen failed to withhold, and such taxes were assessed against and paid by Janssen, then Vertex will indemnify and hold harmless Janssen from and against such taxes (including interest but excluding penalties). If Janssen makes a claim under this Section 9.9(d), it will comply with the obligations imposed by Section 9.9(b) as if Janssen had withheld taxes from a payment to Vertex.

9.10 Interest Penalty . In case of any delay in payment by Janssen to Vertex (including a delay in payment identified in connection with an audit under Section 9.7 above) [***] interest at the [***] assessed from the [***] after the due date of the payment, shall be due from Janssen and payable [***] .

9.11 [*]**

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**Article 10 -Intellectual Property Ownership,
Protection and Related Matters**

- 10.1 Filing, Prosecution and Maintenance of Vertex Patent Rights** . Vertex shall have the exclusive right and the obligation (subject to Vertex's election not to file, prosecute, or maintain pursuant to Section 10.3), to diligently file, prosecute and maintain (by timely paying all maintenance fees, renewal fees, and other such fees and costs required under applicable laws) the Vertex Patent Rights worldwide, and to conduct any interference, opposition and re-examination or other similar proceeding with respect thereto, in all such countries as is customary for Vertex to file, prosecute and maintain patent rights covering pharmaceutical products. [***] If Janssen notifies Vertex that it wishes Vertex to file and prosecute patent applications covering Vertex Patent Rights in any country or countries in the Territory in which it is not customary for Vertex to do so, or to conduct any interference, opposition and re-examination or other similar proceedings with respect to the Vertex Patent Rights in the Territory, [***] Vertex shall keep Janssen advised of the status of all actual and prospective patent filings in the Territory and upon the request of Janssen, provide advance copies of any papers related to the filing, prosecution and maintenance of such patent filings. Vertex shall promptly give reasonable advance notice to Janssen of the grant, lapse, revocation, surrender, invalidation or abandonment of any Vertex Patent Rights in the Territory for which Vertex is responsible for the filing, prosecution and maintenance. Vertex shall solicit Janssen's advice and review of the nature and text of such patent applications and important prosecution matters related thereto in reasonably sufficient time prior to filing thereof, and Vertex shall consider Janssen's comments related thereto.
- 10.2 Filing, Prosecution and Maintenance of Joint Patent Rights** . In respect of any Joint Information and Inventions, the Parties shall agree, without prejudice to ownership, which Party shall have the right and/or obligation to prepare and file a priority patent application, and prosecute such application(s) and maintain any patents derived therefrom, with the Parties equally sharing the Patent Costs for the preparation, filing, prosecution and maintenance of such priority patent application. Should the agreed-upon Party elect not to prepare and/or file any such patent application, it shall (i) provide the other Party with written notice as soon as reasonably possible after making such election but in any event no later than [***] before the other Party would be faced with a possible loss of rights, (ii) give the other Party the right, at the other Party's discretion and sole expense, to prepare and file the priority application(s), and (iii) offer reasonable assistance in connection with such preparation and filing [***] The other Party, at its discretion and cost, may prosecute such application (s) and maintain any patents derived therefrom.

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10.3 Option to Prosecute and Maintain Patents .

10.3.1 Vertex shall give notice to Janssen of any desire to cease prosecution and/or maintenance of Vertex Patent Rights or Joint Patent Rights on a country-by-country basis in the Territory and, in such case, shall permit Janssen, at its sole discretion, to continue prosecution or maintenance of such Vertex Patent Rights [***] . If Janssen elects to continue prosecution or maintenance or to file based on Vertex's election not to file pursuant to this Section 10.3, Vertex shall execute such documents and perform such acts at [***] expense as may be reasonably necessary to allow Janssen to initiate or continue such filing, prosecution or maintenance.

10.3.2 Janssen shall give notice to Vertex of any desire to cease prosecution and/or maintenance of Janssen Patent Rights or Joint Patent Rights in any country and, in such case, shall permit Vertex at its sole discretion, to continue prosecution or maintenance of such Janssen Patent Rights [***] . If Vertex elects to continue prosecution or maintenance or to file based on Janssen's election not to file pursuant to this Section 10.3, Janssen shall execute such documents and perform such acts at [***] expense as may be reasonably necessary to allow Vertex to initiate or continue such filing, prosecution or maintenance.

10.4 Interference, Opposition, Re-examination and Re-issue .

10.4.1 Vertex shall promptly, but in any case within [***] of learning of such event, inform Janssen of any request for, or filing or declaration of, any interference, opposition, or re-examination by a Third Party relating to Vertex Patent Rights or Joint Patent Rights for which Vertex is responsible, in the Territory. Janssen and Vertex shall thereafter consult and cooperate fully to determine a course of action with respect to any such proceeding. Janssen shall have the right to review and approve any submission to be made in connection with such proceeding.

10.4.2 Vertex shall not initiate any re-examination, interference or re-issue proceeding relating to Vertex Patent Rights or Joint Patent Rights in the Territory without the prior written consent of Janssen, which consent shall not be unreasonably withheld.

10.4.3 In connection with any interference, opposition, re-issue, or re-examination proceeding relating to Vertex Patent Rights or Joint Patent Rights in the Territory, Janssen and Vertex will cooperate fully and will provide each other with any information or assistance that either may reasonably request. Vertex shall keep Janssen informed of developments in any such action or proceeding, including, to the extent permissible by law, consultation and approval of any settlement, the status of any settlement negotiations and the terms of any offer related thereto.

10.4.4 The expense of any interference, re-examination or re-issue proceeding, and the expense of any opposition or similar two-party proceeding conducted under rules of the

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U.S. Patent and Trademark Office, or any comparable foreign authority shall, unless agreed otherwise, [***]

10.5 Enforcement and Defense .

10.5.1 Each Party shall promptly give the other Party notice of (i) any infringement of Vertex Patent Rights, Janssen Patent Rights or Joint Patent Rights, or (ii) any misappropriation or misuse of Vertex Know-How or Janssen Know-How, that may come to the first Party's attention. Janssen and Vertex shall thereafter consult and cooperate fully to determine a course of action, including but not limited to the commencement of legal action by either or both Janssen and Vertex, to terminate any infringement of Vertex Patent Rights, Janssen Patent Rights or Joint Patent Rights or any misappropriation or misuse of Vertex Know-How or Janssen Know-How, in the Territory. Vertex, upon notice to Janssen, shall have the first right to initiate and prosecute any such legal action in the name of Vertex and Janssen, or to control the defense of any declaratory judgment action, relating to Vertex Patent Rights, Joint Patent Rights or Vertex Know-How in the Territory. Janssen, upon notice to Vertex, shall have the first right to initiate and prosecute any such legal action in the name of Janssen and Vertex, or to control the defense of any declaratory judgment action, relating to Janssen Patent Rights or Janssen Know-How in the Territory. [***] Each Party shall promptly inform the other Party if it elects not to exercise its first right as described above and the other Party shall thereafter have the right to either initiate and prosecute such action or to control the defense of such declaratory judgment action in its name of and, if necessary, the name of the first Party. Each Party shall have the right to be represented by counsel of its own choice [***]

10.5.2 For any action to terminate any infringement of Vertex Patent Rights, Janssen Patent Rights or Joint Patent Rights or any misappropriation or misuse of Vertex Know-How or Janssen Know-How, as permitted in accordance with Section 10.5.1, in the event that the Party initiating the action is unable to initiate or prosecute such action solely in its own name, the other Party will join such action voluntarily and will execute and cause its Affiliates to execute all documents necessary for the first Party to initiate litigation to prosecute and maintain such action. In connection with any such action, Janssen and Vertex will cooperate fully and will provide each other with any information or assistance that either may reasonably request. Each Party shall keep the other informed of developments in any such action or proceeding, including, to the extent permissible by law, the consultation and approval of any settlement negotiations and the terms of any offer related thereto.

10.5.3 Any recovery obtained by either or both Janssen and Vertex in connection with or as a result of any action contemplated by this Section, whether by settlement or otherwise, shall be shared in order as follows:

[***]

[***]

[***]

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10.5.4 Vertex shall inform Janssen of any certification regarding any Vertex Patent Rights it has received pursuant to either 21 U.S.C. §§355(b)(2)(A)(iv) or (j)(2)(A)(vii)(IV) or its successor provisions or any similar provisions in a country in the Territory and shall provide Janssen with a copy of such certification [***] Vertex's and Janssen's rights with respect to the initiation and prosecution of any legal action as a result of such certification or any recovery obtained as a result of such legal action shall be as defined in subsections 10.5.1 through 10.5.4; provided, however, that Vertex shall have the first right to initiate and prosecute any action and shall inform Janssen of such decision [***], in the case of certification regarding any Vertex Patent Rights it has received pursuant to either 21 U.S.C. §§355(b)(2)(A)(iv) or (j)(2)(A)(vii)(IV), or within a similarly appropriate time in the case of certifications or the like in countries outside of the United States, of receipt of the certification, after which time Janssen shall have the right to initiate and prosecute such action.

10.6 Patent Term Restoration . Vertex shall be responsible for obtaining patent term restoration or supplemental protection certificates or their equivalents in any country in the Territory where applicable to Vertex Patent Rights and Joint Patent Rights. Janssen shall be responsible for obtaining patent term restoration or supplemental protection certificates or their equivalents in any country in the Territory where applicable to Janssen Patent Rights. The Parties hereto shall cooperate with each other in obtaining patent term restoration or supplemental protection certificates or their equivalents in any country in the Territory where applicable to Vertex Patent Rights, Janssen Patent Rights and Joint Patent Rights. In the event that elections with respect to obtaining such patent term restoration are to be made, Vertex shall have the right to make the election with respect to Vertex Patent Rights and Joint Patent Rights and Janssen shall have the right to make the election with respect to Janssen Patent Rights.

10.7 Third Party Claims.

10.7.1 Without prejudice to Section 12.3.2, if any action, suit or proceeding is brought against Janssen or Vertex or any Affiliate or sublicensee of either Party alleging the infringement of the intellectual property rights of a Third Party by reason of the discovery, development, manufacture, use, sale, importation or offer for sale of a Product Candidate or Product in the Territory, Janssen shall have the sole right but not the obligation to defend itself and Vertex in such action, suit or proceeding [***] The Parties shall cooperate with each other in any defense of any such suit, action or proceeding. The Parties will give each other prompt written notice of the commencement of any such suit, action or proceeding, or receipt of any claim of infringement, and will furnish each other a copy of each communication relating to the alleged infringement. Without regard to which Party defends an Infringement Claim under this Section 10.7, all damages (including all reasonable costs and expenses associated with any defense of a claim hereunder) associated with any such infringement claim in the Territory shall be borne equally by the Parties.

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10.7.2 Neither Party shall compromise, litigate, settle or otherwise dispose of any such suit, action or proceeding without the other Party's advice and prior consent, provided that the Party not having the right to defend the suit shall not unreasonably withhold its consent to any settlement which does not have a material adverse effect on its rights, obligations or benefits, either under this Agreement or otherwise. Notwithstanding the foregoing, if Janssen decides to seek a license, and Vertex elects not to seek such license, Janssen may seek to obtain such license for its benefit [***] provided that the terms and conditions of such license do not include an admission of invalidity of any Vertex Patent Rights or Joint Patent Rights, or restrict Vertex's ability to challenge or litigate the validity or applicability of any intellectual property to which the license relates.

10.7.3 The Party first having actual notice of any claim, action or proceeding referenced in Section 10.7.1 above shall promptly notify the other Party in writing, setting forth in reasonable detail, to its knowledge, the facts related to any such claim, action or proceeding. The Parties shall promptly discuss proposed responses to any such matters.

10.8 Trademarks. Janssen shall have the right but not the obligation to use Vertex' Trademarks to market and promote the Product in its Territory, subject to the provisions of the license to be provided under Section 7.6 hereof. Janssen may, however, select all Trademarks which it employs in connection with Product in the Territory, and subject to the following sentence, shall own and control, and shall be responsible for registration and maintenance of all such Trademarks. In the event Janssen selects a Product Trademark for any country in the Territory that is the same as the Product Trademark selected by Vertex for use in the United States, Vertex will own the related Trademark and will provide Janssen with a license as provided in Section 7.6 of this Agreement to use that Trademark in the Territory. [***] Nothing in this Agreement shall be construed as a grant of rights, by license or otherwise, to Vertex to use any Trademarks owned by Janssen for any purpose, except as might otherwise be permitted under applicable law or as provided in Article 13 hereof in the event of the termination of this Agreement by Vertex with cause or by Janssen without cause.

Article 11 -Confidentiality, Publication and Publicity

11.1 Nondisclosure Obligation . All Information disclosed by one Party to the other Party shall be maintained in confidence by the receiving Party and shall not be disclosed to a Third Party or used for any purpose except as set forth herein without the prior written consent of the disclosing Party, except to the extent that such Information:

11.1.1 is known by the receiving Party at the time of its receipt, and not through a prior disclosure by the disclosing Party, as documented by the receiving Party's contemporaneous business records;

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11.1.2 is in the public domain through no breach of this Agreement by the receiving Party;

11.1.3 is subsequently disclosed to the receiving Party by a Third Party who may lawfully make such disclosure and is not to the best of the receiving Party's knowledge under an obligation of confidentiality to the disclosing Party;

11.1.4 is developed by the receiving Party independently of Information received from the disclosing Party, as documented by the receiving Party's contemporaneous business records;

11.1.5 is disclosed to governmental or other regulatory agencies to comply with applicable law or regulations, provided the receiving Party provides to the disclosing Party prompt prior written notice of its obligation to make such disclosure and takes reasonable and lawful actions to avoid or minimize the degree of such disclosure; or

11.1.6 is deemed necessary by the receiving Party in the reasonable exercise of its judgment to be disclosed to Related Parties, agents or consultants, to the extent the receiving Party deems necessary or advisable, in connection with the Development, Manufacturing and/or Commercialization of a Product or Product Candidate (or for such entities to determine their interest in performing such activities) in accordance with this Agreement, on the condition that any such Third Parties agree to be bound by confidentiality and non-use obligations that are no less stringent than those confidentiality and non-use provisions contained in this Agreement.

A combination consisting of multiple components shall not be deemed to fall within the foregoing exclusions merely because one or more individual components of that disclosure are published or available to the general public or in the rightful possession of the receiving Party, unless the combination itself is published or available to the general public or otherwise falls within one of the foregoing exclusions.

If a Party is required by judicial or administrative process to disclose Information that is subject to the non-disclosure provisions of this Section 11.1, such Party shall promptly inform the other Party of the disclosure that is being sought in order to provide the other Party an opportunity to challenge or limit the disclosure obligations. Information that is disclosed by judicial or administrative process shall remain otherwise subject to the confidentiality and non-use provisions of this Section 11.1, and the receiving Party shall cooperate with any reasonable attempts of the disclosing Party to limit any such disclosure required by law, including without limitation by way of obtaining an order of confidentiality, to ensure the continued confidential treatment of such Information.

The confidential and non-use obligations of this Section 11.1 shall survive the termination or expiration of this Agreement.

11.2 Employee, Consultant and Advisor Obligations . Each Party agrees that it and its Affiliates shall provide or permit access to Information received from the other Party and

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such Party's Affiliates and representatives only to the receiving Party's employees, consultants, Permitted Sublicensees and subcontractors, and to the employees, consultants, Permitted Sublicensees and subcontractors of the receiving Party's Affiliates, who in such Party's reasonable judgment have a need to know such Information to assist the receiving Party with the activities contemplated by this Agreement and who are subject to obligations of confidentiality and non-use with respect to such Information no less restrictive than the obligations of confidentiality and non-use of the receiving Party pursuant to Section 11.1; provided that each Party shall remain responsible for any failure by its Affiliates, and its and its Affiliates' respective employees, consultants, permitted subcontractors and sublicensees, to treat such Information as required under Section 11.1 (as if such Affiliates, employees, consultants, permitted subcontractors and sublicensees were Parties directly bound to the requirements of Section 11.1).

11.3 Publication . Each of Janssen and Vertex reserves the right to publish or publicly present the results (the "Results") of the Development Program, subject to the following terms and conditions. The Party proposing to publish or publicly present the Results (the "Publishing Party") will submit a draft of any proposed manuscript, abstract or speech to the other Party (the "Non-Publishing Party") for comments [***] prior to submission for publication or oral presentation. The Non-Publishing Party shall notify the Publishing Party in writing [***] of receipt of such draft whether such draft contains (i) information of the Non-Publishing Party which it considers to be confidential under the provisions of Section 11.1 hereof, (ii) information that if published would have an adverse effect on a patent application covering the subject matter of this Agreement, or (iii) information that the Non-Publishing Party reasonably believes would be likely to have a material adverse impact on the Development, Manufacture or Commercialization of a Product Candidate or Product. In any such notification, the Non-Publishing Party shall indicate with specificity its suggestions regarding the manner and degree to which the Publishing Party may disclose such information. In the case of item (i) above, no Party may publish Information of the other Party without its consent in violation of Section 11.1 of this Agreement. In the case of item (ii) above, the Non-Publishing Party may request a delay and the Publishing Party shall delay such publication or presentation, for a period [***] , to permit the timely preparation and filing of a patent application or an application for a certificate of invention covering the information at issue. In the case of item (iii) above, if the Publishing Party shall disagree with the Non-Publishing Party's assessment of the impact of the publication or presentation, then the issue shall be referred by the Publishing Party to the JSC for resolution, or if there is no JSC at the time of referral, then to the Parties' respective Chief Executive Officers for discussion and resolution. The decision of the JSC or the Chief Executive Officers, if the referral is made to them, shall be final, provided that such decision shall always be subject to the confidentiality provisions of Section 11.1 hereof and shall be made with reasonable regard for the interests of the Non-Publishing Party and provided further that no decision shall be made to publish or present information if the publication or presentation would have a material adverse effect on the commercial prospects of any Product Candidate or Product. The Parties agree that authorship of any publication or presentation will be determined based on the customary standards then being applied in the relevant scientific journal or conference. The Parties will require any

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agents conducting the Development Program on their behalf to comply with publication and presentation restrictions comparable to those set forth herein. The forgoing provisions shall not be interpreted to prevent the publication by a Party of information required by law to be published by that Party.

This Section 11.3 shall terminate with the termination of this Agreement, but the provisions of Section 11.1 hereof shall continue to govern the disclosure by one Party, whether by publication or otherwise, of Information of the other.

11.4 Publicity/Use of Names. Prior to the Effective Date, the Parties shall agree upon the timing and content of an initial press release relating to the execution of this Agreement and its terms. Except to the extent already disclosed in that initial press release, no disclosure of the existence of this Agreement or its terms may be made by either Party, and no Party shall use the name, trademark, trade name or logo of the other Party or its employees in any publicity, news release or promotional materials relating to this Agreement or its subject matter, without the prior express written permission of the other Party, except as permitted by this Agreement or as may be required by applicable laws, regulations, or judicial order. The Party desiring to make any such public announcement shall provide the other Party with a written copy of the proposed announcement sufficiently in advance of the public release to allow such other Party to comment upon such announcement, prior to its release.

In addition to the foregoing restrictions on public disclosure, if either Party concludes that a copy of this Agreement must be filed with a securities exchange or regulatory or governmental body to which that Party is subject, wherever situated, such Party shall provide the other Party with a copy of this Agreement showing any sections as to which the filing Party proposes to request confidential treatment, will provide the other Party with an opportunity and a reasonable time period to comment on any such proposal and to suggest additional portions of the Agreement for confidential treatment and will take such Party's comments into consideration before filing the Agreement. If the filing Party disagrees with the other Party's additional confidential treatment request, the Parties shall attempt in good faith to discuss the matter before the Agreement is filed.

Article 12 -Representations and Warranties; Indemnification

12.1 Representations and Warranties of Vertex . Vertex, for itself and its Affiliates, represents and warrants to Janssen that, as of the Effective Date:

12.1.1 Authorization . This Agreement has been duly executed and delivered by Vertex and constitutes the valid and binding obligation of Vertex, enforceable against Vertex in accordance with its terms except as enforceability may be limited by bankruptcy, fraudulent conveyance, insolvency, reorganization, moratorium and other laws relating to or affecting creditors' rights generally and by general equitable

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principles. The execution, delivery and performance of this Agreement have been duly authorized by all necessary action on the part of Vertex, its officers and directors.

12.1.2 Intellectual Property . The Vertex Patent Rights are existing and, to Vertex's knowledge, the patents in Vertex Patent Rights are not invalid or unenforceable. Vertex has disclosed to Janssen all patent applications and issued patents comprising the Vertex Patent Rights, and all prosecution history relating thereto, which patent applications and issued patents are listed in Schedule 1.116. Except for [***], Vertex has full right and interest in all Vertex Know-How and Vertex Patent Rights. Vertex has not granted any right, title or interest in or to any Vertex Know-How or Vertex Patent Rights that are inconsistent with the rights, licenses and interests granted under the terms of this Agreement.

12.1.3 Encumbrances. To Vertex's knowledge, Vertex Patent Rights are free of any liens, charges and encumbrances.

12.1.4 Mitsubishi. Vertex has the right to sublicense to Janssen hereunder any rights to know-how or patents that it obtains from Mitsubishi Pharma Corporation under its existing agreement with Mitsubishi in connection with Products incorporating VX-950.

12.1.5 Government Funding. Vertex is not a party to any agreement with the U.S. Federal government or an agency thereof pursuant to which the U.S. federal government or such agency provided funding for the development of the Compound or Product.

12.1.6 No Third Party Patents . To Vertex's knowledge, no Third Party right or patent would necessarily be infringed by the Development, Manufacture, use or Commercialization of VX-950 pursuant to this Agreement, and Vertex is not aware of any pending patent application that, if issued, would necessarily be infringed by the Development, Manufacture, use or Commercialization of VX-950 pursuant to this Agreement.

12.1.7 No Interference . The Vertex Patent Rights are not the subject of any interference proceeding known to Vertex, and Vertex is not aware of any pending or threatened action, suit, proceeding or claim by a Third Party challenging Vertex's ownership rights in, or the validity or scope of, the Vertex Patent Rights.

12.1.8 [***]

12.1.9 VX-950 Patents . Schedule 1.116 contains a complete list of all patents and patent applications Controlled by Vertex, as of the Effective Date, that [***]

12.1.10 No Debarment . Neither Vertex nor any of its Affiliates has been debarred or is subject to debarment. During the term of the Development Program and any Supply Agreement adopted hereunder, Vertex and its Affiliates will use commercially reasonable efforts to avoid using in any capacity, in connection with the Development, Manufacture or Commercialization of the Product Candidate or Product, any Person who to Vertex's

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knowledge has been debarred pursuant to Section 306 (or comparable law or regulation) of the United States Federal Food, Drug, and Cosmetic Act, or who to Vertex's knowledge is the subject of a conviction described in such section. Vertex agrees to inform Janssen in writing immediately if it or any Person who is performing services hereunder is debarred or is the subject of a conviction described in Section 306 (or comparable law or regulation), or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to the best of Vertex's knowledge, is threatened, relating to the debarment or conviction of Vertex or any Person used in any capacity by Vertex or any of its Affiliates in connection with the Development, Manufacture or Commercialization of any Product.

12.1.11 [***]

12.2 Representations and Warranties of Janssen . Janssen, for itself and its Affiliates, represents and warrants to Vertex that, as of the Effective Date:

12.2.1 Authorization . This Agreement has been duly executed and delivered by Janssen and constitutes the valid and binding obligation of Janssen, enforceable against Janssen in accordance with its terms, except as enforceability may be limited by bankruptcy, fraudulent conveyance, insolvency, reorganization, moratorium and other laws relating to creditors' rights generally and by general equitable principles. The execution, delivery and performance of this Agreement have been duly authorized by all necessary action on the part of Janssen, its officers and directors.

12.2.2 No Debarment . Neither Janssen nor any of its Affiliates has been debarred or is subject to debarment. During the term of the Development Program and any Supply Agreement adopted hereunder, Janssen and its Affiliates will use commercially reasonable efforts to avoid using in any capacity, in connection with the Development, Manufacture or Commercialization of the Product Candidate or Product, any Person who to Janssen's knowledge has been debarred pursuant to Section 306 (or comparable law or regulation) of the United States Federal Food, Drug, and Cosmetic Act, or who to Janssen's knowledge is the subject of a conviction described in such section. Janssen agrees to inform Vertex in writing immediately if it or any Person who is performing services hereunder is debarred or is the subject of a conviction described in Section 306 (or comparable law or regulation), or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to the best of Janssen's knowledge, is threatened, relating to the debarment or conviction of Janssen or any Person used in any capacity by Janssen or any of its Affiliates in connection with the Development, Manufacture or Commercialization of any Product.

12.2.3 [***]

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12.3 Indemnification .

12.3.1 Indemnification by Vertex . Except to the extent due to the negligence or willful misconduct of Janssen or its Affiliates, and subject to Section 12.3.5, Vertex shall indemnify, defend and hold Janssen and its Affiliates, and their respective directors, officers, employees and agents, harmless from and against any claims of damages (except to the extent arising from any claims of intellectual property infringement), bodily injury, death, or property damage made by a Third Party (a "Third Party Claim") to the extent arising from: (i) the negligence or willful misconduct of Vertex under this Agreement or the Supply Agreement; (ii) the material breach by Vertex of any material warranty, representation or obligation of Vertex under this Agreement; or (iii) any product liability claims related to the Product and arising from Commercialization in North America and the Far East.

12.3.2 Indemnification by Janssen . Except to the extent due to the negligence or willful misconduct of Vertex or its Affiliates, and subject to Section 12.3.5, Janssen shall indemnify, defend and hold Vertex and its Affiliates, and their respective directors, officers, employees and agents, harmless from and against any Third Party Claim resulting from (i) the negligence or willful misconduct of Janssen or its Affiliates under this Agreement, the Supply Agreement or any other supply agreement under which Janssen supplies Product Candidates or Products to Vertex; (ii) the material breach by Janssen of any material warranty, representation or obligation of Janssen under this Agreement; or (iii) any product liability claims related to the Product and arising from Commercialization in the Territory.

12.3.3 Claims for Indemnification . If a Party (the "Indemnitee") intends to claim indemnification under this Section, it shall promptly notify the other Party (the "Indemnitor") in writing of any Third Party Claim for which the Indemnitee intends to claim such indemnification. The failure of the Indemnitee to deliver written notice to the Indemnitor within a reasonable time after the commencement of any such action shall relieve the Indemnitor of any obligation to the Indemnitee under this Section with respect to any such action, to the extent that the failure prejudices the Indemnitor's ability to defend a Third Party Claim. The Indemnitee shall permit the Indemnitor to control the litigation and/or settlement of such Third Party Claim, and cooperate fully with Indemnitor in all matters related thereto, provided that unless agreed by Indemnitee (i) counsel appointed by Indemnitor to defend Indemnitee shall not take any position which, if sustained, would cause Indemnitee not to be indemnified by Indemnitor and (ii) no settlement will involve any terms binding on Indemnitee except payment of money to be paid by Indemnitor.

12.3.4 Direct Damage Claims Only . Neither Party shall be liable to the other for indirect, consequential, special or punitive damages under this Agreement.

12.3.5 Claims Arising in Connection with Development. Except to the extent due to the negligence or willful misconduct of a Party,

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(a) [***]

(b) Janssen will indemnify Vertex from and against any Third Party Claims arising out of any Additional Development Activities conducted by or at the direction of Janssen or its Affiliates, and

(c) Vertex will indemnify Janssen from and against any Third Party Claims arising out of any Additional Development Activities conducted by or at the direction of Vertex.

Article 13 -Term and Termination

13.1 Term and Expiration . This Agreement shall be effective as of the Effective Date and unless terminated earlier pursuant to Sections 13.2, 13.3, 13.6 or 13.7, this Agreement shall continue in effect until expiration of all royalty obligations under Article 9.

13.2 Termination by Janssen Without Cause . Notwithstanding anything contained herein to the contrary, Janssen shall have the right to terminate this Agreement at any time in its sole discretion by giving six month's advance written notice to Vertex; provided, however, if a Product has received a Marketing Authorization in any Major Market Country, the notice required shall be the greater of one (1) year's advance written notice or such longer period as may be required until the assignment and transfer to Vertex of all filings with Regulatory Authorities and Regulatory Approvals in the Territory on a country-by-country basis are deemed valid and effective by all relevant Regulatory Authorities, unless such termination is for a reason other than a Valid Safety Issue, in which case termination may be with immediate effect. For the purposes of this Agreement, a "Valid Safety Issue" [***]

Following any delivery by Janssen of notice of termination pursuant to this Section 13.2, Janssen and Vertex will cooperate in good faith to agree and implement a transition plan, in order to give effect to Section 13.5. Until the earlier of (i) transfer of any central marketing authorization from Janssen to Vertex or its designee or the effective date of any such termination, Janssen will use all reasonable efforts to agree and implement a transition plan and will continue to use Diligent Efforts to Develop, Manufacture and Commercialize Product Candidates and Products in the Territory in accordance with the plans then in effect and approved by the JDC and/or JCC, and will otherwise conduct itself with the objective of avoiding a negative impact, either by its actions or inaction, on the value of a Product Candidate or Product.

13.3 Termination for Cause . This Agreement may be terminated at any time during the term of this Agreement:

13.3.1 upon written notice by either Party if the other Party is in breach of its material obligations hereunder and has not cured such breach after notice from the terminating Party requesting cure of the breach; provided, however, in the event of a good faith

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dispute with respect to the existence of a material breach, the cure period shall be tolled until such time as the dispute is resolved pursuant to Section 14.5; and provided that the terminating Party has given the defaulting Party the following opportunities to remedy any breach:

- (i) the written notice of breach referenced above shall detail the specific obligation under this Agreement which is alleged to have been breached; the manner of such alleged breach; and the steps which must be taken in order to remedy such breach; and
- (ii) the terminating Party has provided the defaulting Party with a reasonable amount of time (but no more than [***]) in which to complete any steps which might be taken to remedy the breach, as stated in the notification of breach;

13.3.2 by either Party upon the filing or institution of bankruptcy, reorganization, liquidation or receivership proceedings, or upon an assignment of a substantial portion of the assets for the benefit of creditors, by the other Party; provided, however, in the case of any involuntary bankruptcy proceeding such right to terminate shall only become effective if the Party consents to the involuntary bankruptcy or such proceeding is not dismissed within [***] after the filing thereof.

13.4 Effect on License of Termination by Janssen for Cause .

13.4.1 If Janssen terminates this Agreement under Section 13.3.1, then (i) Janssen's licenses pursuant to Article 7 shall become perpetual, exclusive licenses subject to the financial provisions of Article 9; and (ii) Janssen shall have the right to offset against any monies owed to Vertex (pursuant to Article 9 of this Agreement) all of its direct costs, losses and expenses incurred as a result of Vertex's breach, [***] Notwithstanding the foregoing, no offsets may be taken by Janssen in any Calendar Year that would reduce the aggregate royalties payable to Vertex on account of Net Sales in that Calendar Year [***]

13.4.2 If Janssen terminates this Agreement pursuant to subsection 13.3.2, all licenses and rights to licenses granted under or pursuant to this Agreement by Vertex to Janssen are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code (the "Code"), licenses of rights to "intellectual property" as defined under Section 101(35A) of the Code. The Parties agree that Janssen, as a licensee of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under the Code, and that upon commencement of a bankruptcy proceeding by Vertex under the Code, or against Vertex if such proceeding is not dismissed within [***] of its initial filing, Janssen shall be entitled to complete access to any such intellectual property and all embodiments of such intellectual property in the Territory.

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13.5 Effect of Termination by Vertex For Cause or by Janssen Without Cause .

If Vertex terminates this Agreement under Section 13.3 or Janssen terminates this Agreement under Section 13.2:

13.5.1 The license granted to Janssen and its Affiliates under Article 7, and any sublicense granted by Janssen with respect to any [***] under Section 7.7, shall terminate as of the effective date of termination, except to the extent necessary to enable Janssen to perform its obligations under this section 13.5, and Janssen shall, within [***] after such termination, return or cause to be returned to Vertex at Vertex's request all Vertex Information in tangible form, and all substances or compositions delivered or provided by Vertex, as well as any other material provided by Vertex in any medium, except that Janssen may retain one copy in its confidential files for records purposes.

13.5.2 The license granted to Vertex by Janssen under Section 7.4 hereof shall continue in effect notwithstanding termination of this Agreement and shall be extended in geographic scope to cover the right to Develop, Manufacture and Commercialize Product Candidates and Products in the Territory. During the period commencing with notice of termination and ending [***] following the effective date of termination, Janssen will provide Vertex and its sublicensees, at Janssen's expense and in accordance with procedures to be agreed by the Parties, with reasonable access to information and know-how necessary for Vertex to apply the licensed technology.

13.5.3 If Vertex terminates this Agreement pursuant to subsection 13.3.2, all licenses and rights to licenses granted under or pursuant to this Agreement by Janssen to Vertex are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code (the "Code"), licenses of rights to "intellectual property" as defined under Section 101(35A) of the Code. The Parties agree that Vertex, as a licensee of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under the Code, and that upon commencement of a bankruptcy proceeding by Janssen under the Code, or against Janssen if such proceeding is not dismissed within [***] of its initial filing, Vertex shall be entitled to complete access to any such intellectual property and all embodiments of such intellectual property in the Territory.

13.5.4 Upon termination by Janssen under Section 13.2, (a) all filings and approvals with Regulatory Authorities and Regulatory Approvals concerning Product Candidates or Products and Marketing Authorizations relating to any Product will be assigned or otherwise transferred to or at the direction of Vertex as soon as practicable and at Janssen's expense, and any reports required to be made to any Regulatory Authority covering any periods prior to the effective date of termination of the Agreement will be prepared promptly and filed at Vertex's direction with the appropriate Regulatory Authority or, at Vertex's discretion, made available to or at the direction of Vertex for filing by Vertex. Janssen will also promptly deliver to or at the direction of Vertex (i) all governmental and regulatory correspondence and conversation logs relating to the Development, Manufacture or Commercialization of Product Candidates and Products in the Territory, (ii) copies of all data, reports, records and materials in Janssen's possession or Control relating to the Development, Manufacture or Commercialization of Product

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Candidates and Products in the Territory, including all non-clinical and clinical data relating to Product Candidates and Products, and (iii) all records and materials in Janssen's possession or Control containing Confidential Information of Vertex.

(b) Janssen will appoint Vertex as Janssen's and/or its Affiliates' agent for all Product-related matters involving Regulatory Authorities in the Territory.

(c) if Vertex so requests, Janssen and its Affiliates will assign to Vertex any agreements with Third Parties relating solely to the Development, Manufacture or Commercialization of the Product to which Janssen is a party to the extent permitted by the applicable law and the terms of such agreements, and Janssen will use best efforts not to enter into any agreement that restricts its ability to comply with this provision.

(d) Janssen will, upon request by Vertex, appoint Vertex or its designee as its exclusive distributor of the Product in the Territory, and grant Vertex or its designee the right to appoint sub-distributors.

(e) Janssen will, at its cost, return to Vertex or its designee all inventory of Intermediates and Product in its possession as of the date of termination and, at Vertex's election, make payment to Vertex for any Intermediates and Product ordered by Janssen pursuant to the Supply Agreement but not yet paid for.

(f) Notwithstanding the provisions of Section 11.1, Vertex shall be able to disclose any such data and information as is necessary to exercise its rights with respect to a Compound, Product Candidate or Product.

(g) Notwithstanding termination of this Agreement, this Section 13.5.4 shall remain in effect until the completion by Janssen of all actions which are required by it to enable a full transfer to Vertex of all filings for Regulatory Approvals and all Marketing Authorizations relating to any Product.

13.5.5 If Janssen or any of its Affiliates at the time of termination is performing any Manufacturing activities with respect to a Product Candidate or Product, then at Vertex's request Janssen or its Affiliates, as applicable, shall continue to perform those Manufacturing activities with respect to a Product on the same terms in accordance with forecasts under the most recent and mutually agreed forecast for commercial supply, as applicable, until [***] During that period Janssen shall use [***] at Janssen cost to cooperate with Vertex in the transition of manufacturing capacity to other sources as early as practicable.

13.6 [***]

This section 13.6 is not a termination provision under section 13.7 of this Agreement.

13.6.1 [***]

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13.6.2 [***]

13.7 Survival .

Any expiration or termination of this Agreement shall be without prejudice to the rights of either Party against the other accrued or accruing under this Agreement prior to expiration or termination, including without limitation the obligation to pay royalties for Product (s) sold prior to such expiration or termination or make other payments under this Agreement. In addition to any other provisions which by their terms specifically survive expiration or termination of this Agreement, the following provisions shall indefinitely survive any expiration or termination of this Agreement: Section 7.4, provided that any and all licenses granted under Section 7.4 shall be non-exclusive, Sections 9.6, 9.7, 9.9, and 9.11, Article 11, Section 12.3, Article 13, sections 14.1, 14.2, 14.3, and 14.5, sections 15.1, 15.3, 15.4, 15.5, 15.6, 15.7, 15.8, 15.9, 15.10, 15.11, 15.12, 15.13, 15.14, and 15.15, and the definitions of terms from Article 1 that are part of the recitation of any of the sections listed in this section 13.7.

13.8 Non-exclusive Remedies . The remedies provided to either Party in this Article 13 shall not be deemed the exclusive remedies available to that Party, and in particular shall not limit any legal or equitable remedies otherwise available to that Party.

Article 14 -Governing Law and Dispute Resolution

14.1 Governing Law . This Agreement shall be governed by and construed in accordance with the laws of The Commonwealth of Massachusetts without reference to any rules of conflict of laws. The United Nations Convention on the Sale of Goods shall not apply.

14.2 Referral to Executive Officers . If for any reason the JSC cannot resolve any matter properly referred to it for resolution, either Party may refer the matter to the Executive Officers for resolution. If, after discussing the matter in good faith and attempting to find a mutually satisfactory resolution to the issue, the Executive Officers fail to come to consensus within [***] after the date on which the matter is referred to the Executive Officers (unless a longer period is agreed to in writing by the Parties) the provisions of Section 14.3 shall apply and resolutions reached through such provisions shall be binding on the Parties; provided that [***]

14.3 Final Decision-Making Authority . If the Executive Officers fail to come to consensus on any matter properly referred to the Executive Officers within the period for resolution set forth in Section 14.2 (an “Unresolved Matter”) then the following provisions shall apply:

14.3.1 Subject to the provisions of subsections 14.3.2 through 14.3.3, Vertex shall have final decision-making authority over all Unresolved Matters;

14.3.2 Janssen shall have final decision-making authority with respect to the following:

14.3.2.1 [*]**

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14.3.2.2 [***]

14.3.2.3 [***]

14.3.2.4 [***]

14.3.3 Notwithstanding the foregoing provisions of this Section 14.3, neither Party shall have final decision-making authority pursuant to this Section 14.3 with respect to matters over which one or the other of the Parties is expressly allocated decision-making authority elsewhere in this Agreement.

14.4 Decision to Terminate or Suspend a Study Based on Safety Concerns . The Party sponsoring or controlling any clinical study of a Product Candidate may terminate or suspend such clinical study if (a) a Regulatory Authority or safety data review board for such clinical study has required such termination or suspension, or (b) if such Party believes in good faith that such termination or suspension is warranted because of safety or tolerability risks to the study subjects. In either case, such Party shall promptly notify the other Party of such termination or suspension, and shall use all reasonable efforts to notify and consult with the other Party prior to taking such action.

14.5 Dispute Resolution.

14.5.1 The Parties shall negotiate in good faith and use reasonable efforts to settle any dispute, controversy or claim arising from or related to this Agreement or the breach thereof. If the Parties are unable to resolve a dispute other than a dispute properly referred to the Executive Officers under Sections 14.2 and 14.3 above, despite using reasonable efforts to do so, either Party may, by written notice to the other, pursue any matter through binding arbitration in accordance with the Rules for Non-Administered Arbitration then pertaining of the International Institute for Conflict Prevention and Resolution (available at <http://www.cpradr.org/arb-intro.asp?M=9.3>) or its successor (“CPR”), except where those rules conflict with these provisions, in which case these provisions control. This dispute resolution provision will be binding on any corporate parent, subsidiary, affiliate under common control, director or officer of the Parties hereto. All proceedings will be conducted in the English language.

14.5.2 The arbitration will be held in Boston, MA.

14.5.3 The panel shall consist of [***] arbitrators chosen from the CPR Panels of Distinguished Neutrals (or, by agreement, from another provider of arbitrators) each of whom is either a lawyer [***] In the event the aggregate damages sought by the claimant are stated to be less than [***] , and the aggregate damages sought by the counterclaimant are stated to be less than [***] then a [***] shall be chosen, having the same qualifications and experience specified above. Each arbitrator shall be impartial and independent of the Parties and shall abide by the Code of Ethics for Arbitrators in Commercial Disputes then pertaining (available at <http://www.adr.org/EthicsAndStandards>).

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14.5.4 The Parties agree to cooperate (1) to attempt to select the arbitrator(s) by agreement within [***] of initiation of the arbitration, including jointly interviewing the final candidates, (2) to meet with the arbitrator(s) within [***] of selection and (3) to agree at that meeting or before upon procedures for discovery and as to the conduct of the hearing which will result in the hearing being concluded within no more than [***] after selection of the arbitrator(s) and in the award being rendered within [***] of the conclusion of the hearings, or of any post-hearing briefing, which briefing will be completed by both sides within [***] after the conclusion of the hearings.

14.5.5 In the event the Parties cannot agree upon selection of the arbitrator(s), the CPR will select arbitrator(s) as follows: CPR shall provide the Parties with a list of no less than [***] proposed arbitrators ([***] if a single arbitrator is to be selected) having the credentials referenced above. Within [***] of receiving such list, the Parties shall rank at least [***] of the proposed arbitrators on the initial CPR list, after exercising cause challenges. The Parties may then interview the [***] candidates ([***] if a [***] arbitrator is to be selected) with the highest combined rankings for no more than [***] each and, following the interviews, may exercise [***] each. The panel will consist of the remaining [***] candidates (or [***] , if [***] is to be selected) with the highest combined rankings. In the event these procedures fail to result in selection of the required number of arbitrators, CPR shall select the appropriate number of arbitrators from among the members of the various CPR Panels of Distinguished Neutrals, allowing each side [***] each.

14.5.6 In the event the Parties cannot agree upon procedures for discovery and hearing, then the arbitrator(s) shall set dates for a hearing, any post-hearing briefing, and the issuance of the award. The arbitrator(s) shall provide for discovery, giving recognition to the understanding of the Parties that they contemplate reasonable discovery, including document demands and depositions. Multiple hearing days will be scheduled consecutively to the greatest extent possible.

14.5.7 The arbitrator(s) are expressly empowered to decide dispositive motions, including but not limited to pre-hearing motions to dismiss and summary judgment motions, and shall endeavor to decide such motions as would a U.S. District Judge of the District where the hearings are to be held.

14.5.8 The arbitrator(s) must render their award by application of the substantive law of the Commonwealth of Massachusetts and are not free to apply “amiable compositeur” or “natural justice and equity.” The arbitrator(s) shall render a written opinion setting forth findings of fact and conclusions of law with the reasons therefor stated. A transcript of the evidence adduced at the hearing shall be made and shall, upon request, be made available to either Party. The arbitrator(s) shall have power to exclude evidence on grounds of hearsay, prejudice beyond its probative value, redundancy, or irrelevance and

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no award shall be overturned by reason of such ruling on evidence. To the extent possible, the arbitration hearings and award will be maintained confidential.

14.5.9 In the event the panel's award exceeds [***] in monetary damages or includes or consists of equitable relief, or rejects a claim in excess of that amount or for that relief, then the losing Party may obtain review of the arbitrators' award or decision pursuant to the CPR Arbitration Appeal Procedure then pertaining by a single appellate arbitrator (the "Appeal Arbitrator") selected from the CPR Panels of Distinguished Neutrals by agreement or, failing agreement within [***] working days, pursuant to the selection procedures specified in Section 14.5.5. If CPR cannot provide such services, the Parties will together select another provider of arbitration services that can do so. No Appeal Arbitrator shall be selected unless he or she can commit to rendering a decision within [***] following oral argument; any such review must be initiated within [***] following the rendering of the award referenced in Section 14.5.8.

14.5.10 The Appeal Arbitrator will make the same review of the arbitration panel's ruling and its bases that the U.S. Court of Appeals of the Circuit where the arbitration hearings are held would make of findings of fact and conclusions of law rendered by a district court after a bench trial and then reverse, modify, vacate or affirm the arbitration panel's award or decision accordingly, or remand to the panel for further proceedings. The Appeal Arbitrator will consider only the arbitration panel's findings of fact and conclusions of law, pertinent portions of the hearing transcript and evidentiary record as submitted by the Parties, opening and reply briefs of the Party pursuing the review, and the answering brief of the opposing Party, plus a total of no more than [***] or oral argument evenly divided between the Parties. The Party seeking review must submit its opening brief and any reply brief within [***] respectively, following the date of the award under review, whereas the opposing Party must submit its responsive brief within [***] of that date. Oral argument shall take place within [***] after the date of the award under review, and the Appeal Arbitrator shall render a decision within [***] following oral argument. That decision will be final and not subject to further review, except pursuant to the Federal Arbitration Act.

14.5.11 The Parties irrevocably consent to and submit their person to the jurisdiction of the U. S. District Court for the District in which the arbitration is held for the enforcement of these provisions and the entry of judgment on any award rendered hereunder (including after review by the Appeal Arbitrator where such an appeal is pursued). Should such court for any reason lack jurisdiction, any court with jurisdiction shall act in the same fashion.

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14.5.12 Each Party has the right before, or if the arbitrator(s) cannot hear the matter within an acceptable period, during the arbitration to seek and obtain from the appropriate court provisional remedies such as attachment, preliminary injunction, replevin, etc. to avoid irreparable harm, maintain the status quo, or preserve the subject matter of the arbitration.

14.5.13 EACH PARTY HERETO WAIVES ITS RIGHT TO TRIAL OF ANY ISSUE BY JURY.

14.5.14 EACH PARTY HERETO WAIVES ANY CLAIM TO PUNITIVE, EXEMPLARY OR MULTIPLIED DAMAGES FROM THE OTHER.

14.5.15 EACH PARTY HERETO WAIVES ANY CLAIM OF CONSEQUENTIAL DAMAGES FROM THE OTHER.

14.5.16 EACH PARTY HERETO WAIVES ANY CLAIM FOR ATTORNEYS' FEES AND COSTS AND PREJUDGMENT INTEREST FROM THE OTHER, EXCEPT THAT THE COST OF THE ARBITRATORS AND ANY FEES AND EXPENSES PAYABLE TO CPR SHALL BE BORNE BY THE PARTY AGAINST WHOM THE MATTER AT ISSUE IS ULTIMATELY RESOLVED.

Article 15 -Miscellaneous

15.1 Force Majeure . Neither Party shall be held liable to the other Party nor be deemed to have defaulted under or breached this Agreement for failure or delay in performing any obligation under this Agreement when such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party including, but not limited to, embargoes, war, acts of war (whether war be declared or not), insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, fire, floods, or other acts of God, or acts, omissions or delays in acting by any governmental authority or the other Party. The affected Party shall notify the other Party of such force majeure circumstances as soon as reasonably practical, and shall promptly undertake all reasonable efforts necessary to cure such force majeure circumstances.

15.2 Assignment . Except as provided in this Section 15.2, this Agreement may not be assigned or otherwise transferred, nor may any right or obligation hereunder be assigned or transferred, by either Party without the consent of the other Party, which consent shall not

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be unreasonably withheld. Either Party may, without the other Party's consent, assign this Agreement and its rights and obligations hereunder in whole or in part to an Affiliate, if that Party guarantees the full performance of its Affiliate's obligations hereunder. Any permitted assignee shall assume all obligations of its assignor under this Agreement and shall be subject to all of the provisions of this Agreement. Any attempted assignment not in accordance with this Section shall be void. Notwithstanding the above, Vertex or Janssen may, without the other's consent, assign this Agreement and all rights and obligations hereunder, in the event it experiences a Change of Control, to the Change of Control party, subject to the other provisions of this Agreement.

15.3 Severability . If any one or more of the provisions contained in this Agreement is held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby, unless the absence of the invalidated provision(s) adversely affects the substantive rights of the Parties. The Parties shall in such an instance use their best efforts to replace the invalid, illegal or unenforceable provision(s) with valid, legal and enforceable provision (s) which, insofar as practical, implement the purposes of this Agreement.

15.4 Notices . All notices that are required or permitted hereunder shall be in writing and will be sufficient if delivered personally, sent by facsimile (and promptly confirmed by personal delivery, registered or certified mail or overnight courier), sent by internationally-recognized courier or sent by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

if to Vertex, to: Vertex Pharmaceuticals Incorporated
130 Waverly Street
Cambridge, MA 02139
Attn: Office of Business Development
Facsimile No.: (617) 444-6632

and: **Attn :** General Counsel
Facsimile No.: (617) 444-7117

if to Janssen, to: Janssen Pharmaceutica, N.V.
30, Turnhoutsesteenweg
B-2340 Beerse, Belgium
Attn: President
Telephone: 32 14 60 2111
Facsimile No.: 32 14 60 2841

and: Office of the General Counsel
Johnson & Johnson
One Johnson & Johnson Plaza
New Brunswick, NJ 08933
Attn: General Counsel
Telephone: 732-524-2448
Facsimile: 732-524-2788

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or to such other address as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith. Any such notice shall be deemed to have been given: (a) when delivered if personally delivered or sent by facsimile on a business day; (b) on the next business day after dispatch if sent by internationally-recognized overnight courier; and/or (c) on the fifth (5th) business day following the date of mailing if sent by other internationally-recognized courier or by mail. Notices hereunder will not be deemed sufficient if provided only between or among each Party's representatives on any committee established in accordance with this Agreement.

- 15.5 Entire Agreement; Amendments** . This Agreement, together with the Exhibits and Schedules hereto, contains the entire understanding of the Parties with respect to the subject matter hereof and supercedes and cancels all previous express or implied agreements and understandings, negotiations, writings and commitments, either oral or written, in respect to the subject matter hereof. The Schedules to this Agreement are incorporated herein by reference and shall be deemed a part of this Agreement. This Agreement may be amended, or any term hereof modified, only by a written instrument duly executed by authorized representatives of both Parties.
- 15.6 Headings** . The captions to the several articles, sections and subsections hereof are not a part of this Agreement, and shall not be interpreted as having any substantive meaning, but are merely for convenience to assist in locating and reading the several Articles and Sections hereof.
- 15.7 Independent Contractors** . It is expressly agreed that Vertex and Janssen shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency. Neither Vertex nor Janssen shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other Party, without the prior written consent of the other Party. Neither Party shall have any responsibility for the hiring, firing or compensation of the other Party's employees or for any employee benefits. No employee or representative of a Party shall have any authority to bind or obligate the other Party to this Agreement for any sum or in any manner whatsoever, or to create or impose any contractual or other liability on the other Party without said Party's written approval.
- 15.8 Waiver** . The waiver by either Party hereto of any right hereunder, or the failure of the other Party to perform, or a breach by the other Party, shall not be deemed a waiver of any other right hereunder or of any other breach or failure by such other Party whether of a similar nature or otherwise.

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- 15.9 Cumulative Remedies** . No remedy referred to in this Agreement is intended to be exclusive, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.
- 15.10 Waiver of Rule of Construction** . Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, the rule of construction that any ambiguity in this Agreement shall be construed against the drafting Party shall not apply.
- 15.11 Certain Conventions** . Any reference in this Agreement to an Article, Section, subsection, paragraph, clause, Schedule or Exhibit shall be deemed to be a reference to an Article, Section, subsection, paragraph, clause, Schedule or Exhibit, of or to, as the case may be, this Agreement, unless otherwise indicated. Unless the context of this Agreement otherwise requires, (a) words of any gender include each other gender, (b) words such as “herein”, “hereof”, and “hereunder” refer to this Agreement as a whole and not merely to the particular provision in which such words appear, and (c) words using the singular shall include the plural, and vice versa.
- 15.12 Counterparts** . This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.
- 15.13 Performance by Affiliates** . To the extent that this Agreement imposes obligations on Affiliates of a Party, such Party agrees to cause its Affiliates to perform such obligations. Either Party may use one or more of its Affiliates to perform its obligations and duties hereunder, provided that the Parties shall remain liable hereunder for the prompt payment and performance of all their respective obligations hereunder. Each of Vertex and Janssen guarantees performance of this Agreement by any of its Affiliates. Any Affiliate of Vertex or Janssen to which rights are extended or which performs any of the obligations required of the respective Party hereunder shall be deemed to have accepted and be bound by the relevant terms and conditions of this Agreement including, without limitation, the jurisdiction and binding effect of the arbitration proceeding carried out pursuant to Section 14.5.
- 15.14 Standstill** . Janssen agrees that during the period beginning on the Effective Date and ending on [***] neither Janssen nor any of its Affiliates will, without the prior written consent of Vertex (i) acquire, or participate as part of a group which in the aggregate acquires, securities representing [***] of the voting power of the outstanding voting securities of Vertex, or (ii) make, or in any way participate in, directly or indirectly, any “solicitation” of “proxies” (as such terms are used in the rules of the United States Securities and Exchange Commission). The foregoing provisions of this Section 15.14 shall no longer apply (i) if Vertex announces publicly that (a) it is seeking, or considering seeking, purchasers for Vertex or (b) it is otherwise exploring, or considering exploring, strategic options in this regard; (ii) upon the commencement by a Third Party of a tender or exchange offer for shares of Vertex voting stock which, when added to shares then owned

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by the Third Party, would result in ownership by the Third Party of [***] of the voting power of the outstanding voting securities of Vertex; (iii) if a Third Party acquires or seeks to acquire beneficial ownership of [***] of the outstanding common stock of Vertex; (iv) if Vertex publicly announces a transaction, or an intention to effect any transaction which would result in (a) the sale by Vertex or one or more of its subsidiaries of assets representing [***] of the consolidated earning power or assets of Vertex; (b) the common stockholders of Vertex (other than stockholders who are Affiliates of the acquiring entity) immediately prior to such transaction owning [***] of the outstanding common stock of the acquiring entity or, in the case of a merger transaction, the surviving corporation (or, if the surviving corporation is a subsidiary of a parent company, the parent company); or (c) a Third Party acquiring beneficial ownership of [***] or more of the outstanding common stock of Vertex.

15.15 Export Control . This Agreement is made subject to any restrictions concerning the export of products or technical information from the United States of America or other countries that may be applicable to Janssen or Vertex from time to time. Neither Party will export, directly or indirectly, any technical information acquired from the other Party under this Agreement, or any products using that technical information, to a location or in a manner that at the time of export requires an export license or other governmental approval, without first obtaining necessary and sufficient consents to do so from the appropriate agency or other governmental authority.

IN WITNESS WHEREOF , the Parties have executed this Agreement as of the date first set forth above.

JANSSEN PHARMACEUTICA, N.V.

By: /s/Dirk Collier
Name: Dirk Collier
Title: Board Member

Date: 30/6/06

By: /s/Didier de Chaffoy de Courcelles
Name: Didier de Chaffoy de Courcelles
Title: Senior Vice President, Research and Early Development
Europe

Date: 30/6/06

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/Kenneth S. Boger
Name: Kenneth S. Boger
Title: Senior Vice President and General Counsel

Date: June 30, 2006

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**Schedule 1.7
Janssen 2006 Universal Calendar**

	M	T	W	T	F	S	S		M	T	W	T	F	S	S
JAN (4 Weeks)	2	3	4	5	6	7	8	JUL (4 Weeks)	3	4	5	6	7	8	9
	9	10	11	12	13	14	15		10	11	12	13	14	15	16
	16	17	18	19	20	21	22		17	18	19	20	21	22	23
	23	24	25	26	27	28	29		24	25	26	27	28	29	30
FEB (4 Weeks)	30	31						AUG (4 Weeks)	31						
			1	2	3	4	5			1	2	3	4	5	6
	6	7	8	9	10	11	12		7	8	9	10	11	12	13
	13	14	15	16	17	18	19		14	15	16	17	18	19	20
	20	21	22	23	24	25	26		21	22	23	24	25	26	27
MAR (5 Weeks)	27	28						SEP (5 Weeks)	28	29	30	31			
			1	2	3	4	5						1	2	3
	6	7	8	9	10	11	12		4	5	6	7	8	9	10
	13	14	15	16	17	18	19		11	12	13	14	15	16	17
	20	21	22	23	24	25	26		18	19	20	21	22	23	24
	27	28	29	30	31				25	26	27	28	29	30	
						1	2								1
APR (4 Weeks)	3	4	5	6	7	8	9	OCT (4 Weeks)	2	3	4	5	6	7	8
	10	11	12	13	14	15	16		9	10	11	12	13	14	15
	17	18	19	20	21	22	23		16	17	18	19	20	21	22
	24	25	26	27	28	29	30		23	24	25	26	27	28	29
MAY (4 Weeks)	1	2	3	4	5	6	7	NOV (4 Weeks)	30	31					
	8	9	10	11	12	13	14				1	2	3	4	5
	15	16	17	18	19	20	21		6	7	8	9	10	11	12
	22	23	24	25	26	27	28		13	14	15	16	17	18	19
									20	21	22	23	24	25	26
JUN (5 Weeks)	29	30	31					DEC (5 Weeks)	27	28	29	30			
				1	2	3	4						1	2	3
	5	6	7	8	9	10	11		4	5	6	7	8	9	10
	12	13	14	15	16	17	18		11	12	13	14	15	16	17
	19	20	21	22	23	24	25		18	19	20	21	22	23	24
	26	27	28	29	30				25	26	27	28	29	30	31
						1	2								

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Schedule 1.19

[***]

[***]

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Schedule 1.31
Existing Third Party Agreements

[***]

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Schedule 1.32
Far East

[***]

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[***]

Docket No.	Serial No.	Patent No.	Publication No.	Status	Filed
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Docket No.	Serial No.	Patent No.	Publication No.	Status	Filed
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VPI/04-139 US	11/264,746		US	PUBLISHED	10/31/2005

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			2006/0105978		
VPI/04-139 WO	PCT/US2005/039240		WO 2006/050250	PUBLISHED	10/31/2005

Docket No.	Serial No.	Patent No.	Publication No.	Status	Filed
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VPI/04-136 WO	PCT/US2005/035191		WO 2006/039488	PUBLISHED	09/30/2005
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Docket No.	Serial No.	Patent No.	Publication No.	Status	Filed
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VPI/04-114 US	11/147,524		US 2006/0089385	PUBLISHED	06/08/2005
VPI/04-114 WO	PCT/US2005/019929		WO 2005/123076	PUBLISHED	06/08/2005

Docket No.	Serial No.	Patent No.	Publication No.	Status	Filed
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VPI/03-172 US	10/974,558	US	PUBLISHED	10/27/2004
VPI/03-172 WO	PCT/US2004/03583 9	WO	PUBLISHED	10/27/2004

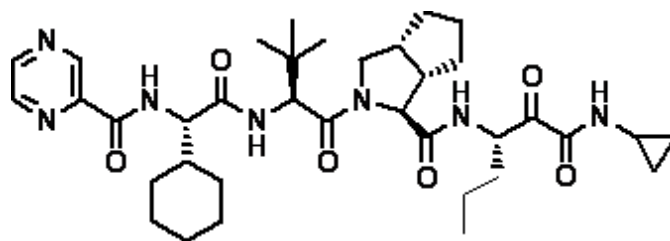
*Portions of this exhibit, indicated by the mark “[***],” have been redacted pursuant to a confidential treatment request. An unredacted version of this exhibit has been filed separately with the Commission.*

Docket No.	Serial No.	Patent No.	Publication No.	Status	Filed
***	***			***	***
VPI/03-171 US	10/974,538		US 2006/0003942	PUBLISHED	10/27/2004
VPI/03-171 WO	PCT/US2004/035549		WO 2005/042020	PUBLISHED	10/27/2004

Docket No.	Serial No.	Patent No.	Publication No.	Status	Filed
VPI/03-149 TW	093127683		200518669	PUBLISHED	09/13/2004
***	***			***	***
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***	***			***	***
VPI/03-149 US	10/939,958		US 2005/0120398	PUBLISHED	09/13/2004
VPI/03-149 WO	PCT/US2004/29961		WO 2005/025517	PUBLISHED	09/13/2004

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Schedule 1.117
VX-950



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Exhibit 4.5(a)
Supply Agreement Key Elements

The Parties agree to negotiate the terms of a supply agreement in good faith, subject to the terms of this Agreement, which will include the following:

1. Vertex will supply Product that meets the Specifications (unless otherwise agreed by Vertex) to Janssen [***] the Effective Date of the Agreement.
2. Janssen will forecast and place orders with Vertex for its Product requirements and its requirement of Intermediates for Commercialization in the Territory, commencing [***] of the first requested delivery of Tablets. Based on the current Development Program, the first forecast to be provided under the Supply Agreement will be due [***] Based on the forecast, Vertex will make commitments to Third Party Manufacturers for Territory supplies, in accordance with lead-time or contractual obligations with Third Party Manufacturers, that will be binding on Janssen.
3. Vertex will supply Janssen through its Third Party Manufacturers in accordance with the terms of the Third Party Manufacturer agreements.
4. Vertex will supply the Product to Janssen at [***] . All [***] directly related to supply of Product to the Territory will be borne by Janssen. Vertex will provide financial transparency for all [***] associated with supply of Product for the Territory.
5. Delivery will be FCA facility (see INCOTERMS 2000).
6. Janssen will be responsible for shipping and handling charges arising in connection with Product delivered to Janssen, and for defining the method of shipment and for undertaking, at its expense, any validation that may be required.
7. Rights with respect to non-conforming product, shortage of supply and late delivery will be consistent with comparable rights that Vertex has with the relevant Third Party Manufacturers. [***]
8. [***]
9. Representations, warranties, insurance and indemnification will be no more extensive than those which Vertex has in the relevant Third Party Agreements.
10. Vertex's liability will be limited to its own negligence. [***] In the event product delivered to Janssen is non-conforming, Janssen's remedy will be that Vertex will [***] to seek remedies available pursuant to the relevant Third Party Manufacturing Agreements and pass those remedies on to Janssen.
11. The agreement will include provisions that address continuity of supply concerns for Janssen.

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12. The Parties will execute a Quality Agreement.

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AGREEMENT

AGREEMENT made and entered into in Cambridge, Massachusetts, by and between Vertex Pharmaceuticals Incorporated (the “Company”) and Jeffrey M. Leiden, MD., Ph.D. (the “Executive”), effective as of the 14th day of December, 2011.

WHEREAS, the operations of the Company and its Affiliates are a complex matter requiring direction and leadership in a variety of arenas, including financial, strategic planning, regulatory, community relations and others;

WHEREAS, the Executive is possessed of certain experience and expertise in the Company’s industry that qualify him to provide the direction and leadership required by the Company and its Affiliates and also has knowledge of the Company, having served as a member of its board of directors (the “Board”) since 2009; and

WHEREAS, subject to the terms and conditions hereinafter set forth, the Company therefore wishes to employ the Executive as President and Chief Executive Officer of the Company and the Executive wishes to accept such employment;

NOW, THEREFORE, in consideration of the foregoing premises and the mutual promises, terms, provisions and conditions set forth in this Agreement, the parties hereby agree:

1. Employment. Subject to the terms and conditions set forth in this Agreement, the Company hereby offers, and the Executive hereby accepts, employment.

2. Term. Subject to earlier termination as hereinafter provided, the Executive’s employment under this Agreement shall be for a term (the “Term”) commencing on December 14, 2011 (the “Commencement Date”) and expiring on January 31, 2016 (the “Expiration Date”). The Term of this Agreement may be extended or renewed only by written agreement signed by the Executive and an expressly authorized representative of the Board, provided, however, that if the Executive’s employment with the Company continues beyond the Expiration Date, the provisions of Section 5(d) of this Agreement shall continue to remain in full force and effect unless or until amended or superseded by written agreement.

3. Capacity and Performance.

(a) On February 1, 2012 and thereafter during the Term of this Agreement, the Executive shall be appointed as and serve as the Company’s President and Chief Executive Officer. At the Board of Directors meeting occurring immediately after the Company’s 2012 Annual Meeting of its shareholders and thereafter during the Term of this Agreement, the Board of Directors shall elect the Executive as Chairman of the Board (“Chairman”). In addition, and without further compensation, the Executive shall serve as a director and/or officer of one or more of the Company’s Immediate Affiliates (as defined in Section 9 hereof) if so elected or

appointed from time to time. At the request of the Board, upon termination of his employment with the Company for any reason, the Executive shall resign as a member of the Board and as Chairman and his offices as President and Chief Executive Officer of the Company and shall resign from any other positions, offices and directorships he may have with the Company or any of its Immediate Affiliates.

(b) During the Term of this Agreement, the Executive shall be employed by the Company on a full-time basis and shall perform the duties and responsibilities of his positions and offices and such other duties and responsibilities on behalf of the Company and its Affiliates, reasonably related to one or more of his positions and offices, as may be assigned to him from time to time by the Board or a designated committee thereof.

(c) During the Term of this Agreement, the Executive shall devote his full business time, except as otherwise provided in this Section 3(c), and his best efforts, business judgment, skill and knowledge exclusively to the advancement of the business and interests of the Company and its Affiliates and to the discharge of his duties and responsibilities hereunder. The Executive may engage in the passive management of his personal and family investments and in charitable and community activities; provided that such activities, and any memberships on board of directors or other governing boards other than those of the Company and its Immediate Affiliates authorized by the Board, do not, individually or in the aggregate, give rise to a conflict of interest or otherwise materially interfere with his performance of his duties and responsibilities to the Company and its Affiliates under this Agreement or the time required for their performance or breach his obligations set forth in the agreement between the Company and the Executive entitled "Employee Non-Disclosure, Non-Competition and Inventions Agreement" of even date with this Agreement (the "Employee Agreement"). The Executive has informed the Board of his membership on a number of boards of directors and of his current position with Clarus Ventures, LLC. The Executive shall resign from each of these memberships and positions no later than January 31, 2012, but may perform those services as a member of such boards and in his position for Clarus Ventures reasonably necessary to terminate those services. As such, the Executive's continued service as a member of such boards and for Clarus Ventures through January 31, 2012 shall not be a violation of this Agreement. The Executive shall not accept membership on any board of directors or other governing board of any Person or engage in any other business activity without the prior express written approval of the Board.

(d) As a condition of the Company to entering into this Agreement, the Executive shall execute and deliver to the Company the Employee Agreement.

(e) The Company agrees to propose to the shareholders of the Company at each appropriate Annual Meeting of such shareholders during the Term of this Agreement the reelection of the Executive as a member of the Board.

4. Compensation and Benefits. As compensation for all services performed by the Executive under and during the Term of this Agreement and subject to performance of the Executive's duties and responsibilities and of his obligations to the Company and its Affiliates, pursuant to this Agreement, the Employee Agreement or otherwise:

(a) Base Salary. During the Term of this Agreement, the Company shall pay the Executive a base salary at the rate of One Million Dollars (\$1,000,000) per year, payable in accordance with the normal payroll practices of the Company for its executives and subject to increase from time to time in the sole discretion of the Board or a designated committee thereof. Such base salary, as from time to time increased, is hereafter referred to as the “Base Salary.”

(b) Performance Bonus Compensation. For each fiscal year completed during the Term of this Agreement, the Executive shall have the opportunity to earn an annual bonus (“Annual Bonus”) under the executive performance bonus plan then applicable to the Company’s executives generally, as in effect from time to time, based on target objectives determined by the Board or a designated committee thereof after consultation with the Executive. The Executive’s target bonus opportunity (the “Target Bonus”) under the executive performance bonus plan shall be One Hundred and Twenty Percent (120%) of the Base Salary, with the actual amount of each Annual Bonus being determined in the reasonable discretion of the Board or its designated committee based on the performance of the Executive and the Company against the target objectives. Except as otherwise provided in accordance with the applicable provision of Section 5 hereof in the event of termination of the Executive’s employment hereunder, the Executive, in order to be eligible to earn an Annual Bonus for any fiscal year occurring during the Term of this Agreement, must be employed on the date payment of annual bonuses for that fiscal year is made to Company executives generally, which generally shall occur not later than two and one-half months following the close of the fiscal year for which the Annual Bonus was earned.

(c) Equity Participation. The Board shall grant the Executive equity in accordance with the following:

(i) On the Commencement Date, the Board shall grant the Executive a non-qualified option to purchase 458,108 shares of the common stock of the Company, with an exercise price equal to the fair market value on the date of grant (the “Option”), subject to the Executive’s signing of the agreement captioned “Vertex Pharmaceuticals Incorporated Amended and Restated 2006 Stock and Option Plan Stock Option Grant” (the “Option Agreement”) under which the Option is granted. The Option represents the Executive’s initial equity grant. The shares subject to the Option shall vest quarterly during the four (4) year period following the date of grant in accordance with the terms and conditions of the plan captioned “Vertex Pharmaceuticals Incorporated Amended and Restated 2006 Stock and Option Plan” (the “Stock and Option Plan”) and the Option Agreement, provided that the Executive is employed by the Company, or otherwise performing services to the Company as a non-employee director, on each vesting date. Except as otherwise provided in this Agreement, the Option shall be subject to all terms and conditions of the Stock and Option Plan and the Option Agreement and to such Company securities trading policies generally applicable to Company executives and the equity granted to them, as in effect from time to time.

(ii) On the Commencement Date, the Board shall grant the Executive 50,017 shares of restricted stock (the “Cliff-Vest Restricted Stock”), subject to the Executive’s signing of the agreement captioned “Vertex Pharmaceuticals Incorporated

Amended and Restated 2006 Stock and Option Plan Restricted Stock Award (Cliff Vest)” (the “Cliff-Vest Restricted Stock Agreement”) under which the Cliff-Vest Restricted Stock is granted. The Cliff-Vest Restricted Stock represents a retention grant intended to induce the Executive to remain employed by the Company. Accordingly, the Cliff-Vest Restricted Stock shall vest in its entirety on the third (3rd) anniversary of the date of grant, provided that the Executive is employed by the Company hereunder, or otherwise performing services to the Company as a non-employee director, on the vesting date. Except as otherwise provided in this Agreement, the Cliff-Vest Restricted Stock shall be subject to all terms and conditions of the Stock and Option Plan and the Cliff-Vest Restricted Stock Agreement and to such Company securities trading policies generally applicable to Company executives and the equity granted to them, as in effect from time to time.

(iii) On the Commencement Date, the Board shall grant the Executive 133,378 shares of restricted stock (the “Performance Restricted Stock”), subject to the Executive’s signing of the agreement captioned “Vertex Pharmaceuticals Incorporated Amended and Restated 2006 Stock and Option Plan Restricted Stock Award (Performance)” (the “Performance Restricted Stock Agreement”) under which the Performance Restricted Stock is granted. The Performance Restricted Stock represents compensation to the Executive to induce him to accept employment with the Company and surrender equity compensation to which he would otherwise be entitled as a Partner and Managing Director of Clarus Ventures, LLC. The Performance Restricted Stock shall be subject to vesting as set forth in the Performance Restricted Stock Agreement, provided that the Executive is employed by the Company hereunder, or otherwise performing services to the Company as a non-employee director, on the vesting dates except as otherwise set forth in Sections 5(a), (b) and (d)(i)(D) hereof.

Except as otherwise provided in this Agreement, the Performance Restricted Stock shall be subject to all terms and conditions of the Stock and Option Plan and the Performance Restricted Stock Agreement and to such Company securities trading policies generally applicable to Company executives and the equity granted to them, as in effect from time to time.

(iv) The Executive shall be eligible for additional grants of equity compensation (by which is meant stock options, restricted stock and restricted stock units, if any, granted by the Company to employees) only to the extent expressly awarded to him individually in the discretion of the Board or its delegates.

(d) Vacations. During the Term of this Agreement, the Executive shall be entitled to earn vacation at the rate of four (4) weeks per year, to be taken at such times and intervals as shall be determined by the Executive, subject to the reasonable business needs of the Company and its Immediate Affiliates. Vacation shall otherwise be governed by the policies of the Company as applicable to its executives generally, as in effect from time to time.

(e) Other Benefits. During the Term of this Agreement, the Executive shall be entitled to participate in any and all Employee Benefit Plans from time to time in effect for executives of the Company generally, except to the extent any such Employee Benefit Plan is in a category of benefit provided to the Executive under this Agreement (*e.g.* , a severance pay plan) or otherwise provided the Executive by the Company or any of its Immediate Affiliates; provided, however, that, if a benefit provided the Executive other than under this Agreement disqualifies the Executive from participating in an Employee Benefit Plan for which he would otherwise be eligible, the Company will provide the Executive notice of such disqualification. Such participation shall be subject to the terms of the applicable plan documents and generally applicable Company policies. For purposes of this Agreement, “ Employee Benefit Plan ” shall have the meaning ascribed to such term in Section 3(3) of ERISA, as amended from time to time.

(f) Business Expenses.

(i) The Company shall pay or reimburse the Executive for all reasonable and customary business expenses incurred or paid by the Executive in the performance of his duties and responsibilities hereunder, subject to any maximum annual limit and other restrictions on such expenses set by the Board as applicable to executives of the Company generally and to such reasonable substantiation and documentation as may be specified by the Company from time to time.

(ii) Any reimbursement of expenses that would constitute nonqualified deferred compensation subject to Section 409A of the Code and the regulations promulgated thereunder, each as amended, (“ Section 409A ”) shall be subject to the following additional rules: (A) no reimbursement of any such expense shall affect the Executive’s right to reimbursement of any other such expense in any other taxable year; (B) reimbursement of the expense shall be made, if at all, not later than the end of the calendar year following the calendar year in which the expense was incurred; and (C) the right to reimbursement shall not be subject to liquidation or exchange for any other benefit.

(g) Relocation Expenses. The Company shall not be obligated to reimburse any relocation expenses incurred by the Executive in relocating to the greater Cambridge, Massachusetts area.

(i) Reimbursement of Legal Fees. The Company shall reimburse the Executive’s legal fees and expenses incurred in the negotiation of the terms and conditions of his employment with the Company under this Agreement and the Employee Agreement, to a maximum total reimbursement not to exceed twenty thousand dollars (\$20,000), subject to such reasonable substantiation, documentation and submission deadlines as may be specified by the Company.

5. Termination of Employment and Severance Benefits. Notwithstanding the provisions of Section 2 hereof, the Executive’s employment may be terminated and this Agreement terminated prior to the Expiration Date under the following circumstances and, with

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respect to a termination of the Executive’s employment without Cause pursuant to 5(d) of this Agreement, on or after the Expiration Date:

(a) Death. In the event of the Executive’s death during the Term of this Agreement, the Executive’s employment hereunder shall immediately and automatically terminate on that date. In such event, following the Date of Termination (as defined in Section 9 hereof), the Company (i) shall pay to the Executive’s estate any Final Compensation (also as defined in Section 9) that is due, such payment to be made on the next regular payroll date of the Company; (ii) shall pay to the Executive’s estate any Annual Bonus earned for the fiscal year immediately preceding that in which the Executive’s death occurs, if unpaid on the Date of Termination, which Annual Bonus shall be paid to his estate on the date annual bonuses for that immediately preceding fiscal year are paid to Company executives generally; and (iii) shall pay to the Executive’s estate a Final Pro-Rated Bonus (determined in accordance with the definition set forth in Section 9 hereof), payable on the date annual bonuses for that fiscal year are paid to Company executives generally, but in any event prior to March 15 of the year following the performance year to which the Final Pro-Rated Bonus relates. Any equity granted the Executive pursuant to Section 4(c) hereof shall be governed by Section 4(c), and by the Stock and Option Plan or any successor plan, any applicable agreements and any applicable Company securities trading policies, provided, however, that (v) the Option shall vest in full on the Date of Termination and any shares subject to the Option shall remain exercisable until the earlier of the end of the one year period following the Date of Termination and the date on which the Option would otherwise expire, (w) any Additional Options (as defined in Section 9 hereof) that remain unvested on the Date of Termination shall be deemed to have been held by the Executive for an additional 12 months from the Date of Termination for purposes of vesting and exercise rights and any shares subject to any grant of Additional Options shall remain exercisable until the earlier of the end of the one year period following the Date of Termination and the date on which the option to which those shares are subject would otherwise expire, (x) any additional restricted stock award that vests proportionately over time shall be deemed to have been held by the Executive for an additional 12 months from the Date of Termination, (y) any restricted stock award that cliff-vests (meaning, all shares vest on a specified date), including but not limited to the Cliff-Vest Restricted Stock, shall be deemed to vest proportionately over time on a daily basis from the date of grant through the Date of Termination, and (z) any shares of Performance Restricted Stock that are unvested on the Date of Termination shall continue to be subject to the vesting terms of the Performance Restricted Stock Agreement for the period following the Date of Termination until the last date on which vesting under the Performance Restricted Stock Agreement is possible (no later than the date of the Company’s 2014 Annual Meeting of its shareholders). The Company shall have no obligation or liability to the Executive or his estate under this Agreement, other than as set forth expressly in this Section 5(a).

(b) Disability.

(i) The Company may terminate the Executive’s employment hereunder during the Term of this Agreement

upon notice to the Executive in the event that the Executive becomes disabled through any illness, injury, accident or condition of either a physical or psychological nature and, as a result, is unable to perform all or

substantially all of his duties and responsibilities hereunder for one hundred and eighty (180) days during any period of three hundred and sixty-five (365) consecutive calendar days. In the event of such termination, the Company shall (i) pay to the Executive any Final Compensation that is due, such payment to be made on the next regular payroll date of the Company; (ii) shall pay the Executive any Annual Bonus earned for the fiscal year immediately preceding that in which termination of the Executive's employment occurs, if unpaid on the Date of Termination, which Annual Bonus shall be paid on the date annual bonuses for that immediately preceding fiscal year are paid to Company executives generally, and (iii) shall pay to the Executive a Final Pro-Rated Bonus, payable on the date annual bonuses for that fiscal year are paid to Company executives generally, but in any event prior to March 15 of the year following the performance year to which the Final Pro-Rated Bonus relates. Any equity granted the Executive pursuant to Section 4(c) hereof shall be governed by Section 4(c) and by the Stock and Option Plan or any successor plan, any applicable agreements and any applicable Company securities trading policies, provided, however, that (v) the Option shall vest in full on the Date of Termination and any shares subject to the Option shall remain exercisable until the earlier of the end of the one year period following the Date of Termination and the date on which the Option would otherwise expire, (w) any Additional Options that remain unvested on the Date of Termination shall be deemed to have been held by the Executive for an additional 12 months from the Date of Termination for purposes of vesting and exercise rights and any shares subject to any grant of Additional Options shall remain exercisable until the earlier of the end of the one year period following the Date of Termination and the date on which the option to which those shares are subject would otherwise expire, (x) any additional restricted stock award that vests proportionately over time shall be deemed to have been held by the Executive for an additional 12 months from the Date of Termination, (y) any restricted stock award that cliff-vests (meaning, all shares vest on a specified date), including but not limited to the Cliff-Vest Restricted Stock, shall be deemed to vest proportionately over time on a daily basis from the date of grant through the Date of Termination, and (z) any shares of Performance Restricted Stock that are unvested on the Date of Termination shall continue to be subject to the vesting terms of the Performance Restricted Stock Agreement for the period following the Date of Termination until the last date on which vesting under the Performance Restricted Stock Agreement is possible (no later than the date of the Company's 2014 Annual Meeting of its shareholders). The Company shall have no obligation or liability to the Executive under this Agreement other than as expressly set forth in this Section 5(b)(i).

(ii) The Board may designate another employee to act in the Executive's place during any period of the Executive's disability (and such designation shall not be deemed to be grounds for the Executive to exercise his right to resign for Good Reason under Section 5(e)). Notwithstanding any such designation, the Executive shall continue to receive the Base Salary in accordance with Section 4(a) hereof and shall continue participation in the Employee Benefit Plans of the Company in accordance with Section 4(e) to the extent permitted by the then-current terms of the applicable Employee Benefit Plans, until the Executive becomes eligible for disability income benefits under

any disability income plan in which the Executive is participating through his employment with the Company or until the termination of his employment, whichever shall occur first. While receiving disability income benefits under any such disability income plan, the Executive shall not be entitled to receive any Base Salary under Section 4(a) hereof, but (x) all Company equity grants held by the Executive shall continue to vest in accordance with their terms; and (y) the Executive shall be entitled to continue to participate in the Company's Employee Benefit Plans, in accordance with Section 4(e) to the extent permitted by the then-current terms of the Employee Benefit Plans, until the termination of his employment.

(iii) If any question shall arise as to whether during any period the Executive is disabled through any illness, injury, accident or condition of either a physical or psychological nature so as to be unable to perform all or substantially all of his duties and responsibilities hereunder, the Executive may, and at the request of the Company shall, submit to a medical examination by a physician selected by the Company to whom the Executive or his duly appointed guardian, if any, has no reasonable objection to determine whether the Executive is so disabled and such determination shall for the purposes of this Agreement be conclusive of the issue. If such question shall arise and the Executive shall fail to submit to such medical examination, the Board's determination of the issue shall be binding on the Executive.

(c) By the Company for Cause. The Company may terminate the Executive's employment hereunder for Cause at any time during the Term of this Agreement upon notice to the Executive setting forth in reasonable detail the nature of such Cause. The following, as determined by the Board in its reasonable judgment, shall constitute "Cause" for termination:

(i) the Executive's refusal or willful failure to perform (other than by reason of disability), or gross negligence in the performance of, his duties and responsibilities to the Company or any of its Affiliates, which remains uncured or continues after thirty (30) days' notice from the Company specifying in reasonable detail the nature of the refusal, willful failure or gross negligence;

(ii) a material breach of the Employee Agreement or a material breach of a fiduciary duty owed to the Company;

(iii) fraud, embezzlement or other dishonesty by the Executive with respect to the Company or any of its Affiliates (exclusive of trivial matters and good faith errors) or a breach of a published Company policy that places the Company at substantial risk of material liability; or

(iv) the Executive's conviction or plea of guilty or nolo contendere to a felony or any misdemeanor involving moral turpitude.

In the event of termination under this Section 5(c), following the Date of Termination, the Company shall pay the Executive any Final Compensation that is due, such payment to be made on the next regular payroll date of the Company. The Option, any Additional Options, the Cliff-

Vest Restricted Stock, the Performance Restricted Stock and any other equity granted the Executive pursuant to Section 4(c)(iv) hereof shall be forfeited effective on the Date of Termination. The Company shall have no obligation or liability to the Executive under this Agreement, other than as expressly set forth in this Section 5(c).

(d) By the Company Other than for Cause. The Company may terminate the Executive's employment hereunder other than for Cause upon notice to the Executive at any time during the Term of this Agreement, on the Expiration Date or following the Expiration Date unless and until this provision is superseded by the Executive and the Company in writing. In the event of such termination, the Company (i) shall pay to the Executive any Final Compensation that is due, such payment to be made on the next regular payroll date of the Company; and (ii) the Company shall pay the Executive any Annual Bonus earned for the fiscal year immediately preceding that in which termination occurs, if unpaid on the Date of Termination, which Annual Bonus shall be payable on the date annual bonuses for that immediately preceding fiscal year are paid to Company executives generally. In addition, the Company shall provide the Executive the following:

(i) Severance Benefits.

(A) Severance Pay. The Company shall provide the Executive severance pay equal to one-twelfth of the sum of the Base Salary and the Target Bonus for the fiscal year in which the Date of Termination occurs multiplied by 24 (the "Severance Pay"), paid in equal installments over the period of 24 months following the Date of Termination (the "Severance Pay Period"). Subject to Section 5(h)(i) hereof, Severance Pay to which the Executive is entitled hereunder shall be payable in accordance with the normal payroll practices of the Company for its executives (but, excluding only the first payment, no less frequently than monthly), with the first payment, which shall be retroactive to the day immediately following the Date of Termination, being due and payable on the Company's next regular payday for its executives that follows the expiration of sixty (60) calendar days from the Date of Termination.

(B) Premium Contributions. Provided that the Executive and his eligible dependents, if any, are participating in the Company's group health, dental and vision plans (to the extent offered by the Company) on the Date of Termination and elect on a timely basis to continue that participation in some or all of the offered plans through the federal law commonly known as "COBRA," the Company will contribute to the premium cost of that participation the same amount it contributes to the premium cost of participation by its actively employed executives and their eligible dependents in those plans, until the earlier to occur of the last day of the eighteenth month after the Date of Termination and the date the Executive is eligible to enroll in the health, dental and/or vision plans of another employer; provided, however, that such participation is dependent on the Executive and his dependents continuing to be eligible to continue participation in the Company's offered plans through COBRA and the Executive paying, by payroll deduction, any employee contribution toward the premium cost of such participation that

is applicable to the Company's actively employed executives generally. Notwithstanding the foregoing, if this payment arrangement would cause any of the Company's group health, dental or vision plans to fail the non-discrimination testing required by Section 105 (h) of the Code, the Company may, in its sole discretion, require that the contributions made by the Executive be made on an after-tax basis and the contributions made by the Company be made on a taxable basis. The Executive agrees to notify the Company promptly if he is eligible to enroll in the plans of another employer or if he or any of his dependents ceases to be eligible to continue participation in Company plans through COBRA.

(C) Final Pro-Rated Bonus. The Company shall pay to the Executive a Final Pro-Rated Bonus on the later of the date annual bonuses for that fiscal year are paid to Company executives generally (but in any event prior to March 15 of the year following the performance year to which the Final Pro-Rated Bonus relates) and the date of the Company's next regular payday for its executives that follows the expiration of sixty (60) calendar days from the Date of Termination.

(D) Accelerated Vesting of Certain Restricted Stock Awards. The next business day following the date the Release of Claims (as that term is defined in Section 5(d)(ii) below) becomes effective and irrevocable is hereafter referred to as the "Accelerated Vesting Date". If the Cliff-Vest Restricted Stock is unvested on the Date of Termination, the Cliff-Vest Restricted Stock shall fully vest on the Accelerated Vesting Date. With respect to any additional grant of restricted stock provided the Executive in connection with his employment hereunder (excluding the Cliff-Vest Restricted Stock and the Performance Restricted Stock) that is unvested on the Date of Termination, such restricted stock shall vest in full on the Accelerated Vesting Date if its normal vesting date is no more than eighteen (18) months from the Date of Termination (for purposes of this sentence, the "normal vesting date" of a restricted stock grant with time-based vesting provisions subject to accelerated vesting upon satisfaction of specified performance objectives shall refer to the time-based vesting without regard to any potential vesting acceleration). Notwithstanding the foregoing, the accelerated vesting of the Cliff-Vest Restricted Stock and any additional restricted stock granted to the Executive pursuant to Section 4 (c) hereof shall be governed by the applicable provisions of the Stock and Option Plan or any successor plan, the Cliff-Vest Restricted Stock Agreement, the applicable grant agreement and any other applicable agreements, except to the extent that the terms of this Section are more favorable to the Executive. Any shares of Performance Restricted Stock that are unvested on the Date of Termination shall not be subject to accelerated vesting under this Section and shall continue to be subject to the vesting terms of the Performance Restricted Stock Agreement for the period following the Accelerated Vesting Date until the last date on which vesting under the Performance Restricted Stock Agreement is possible (no later than the date of the Company's 2014 Annual Meeting of its shareholders).

(E) Continued Vesting of Options; Exercisability. Following the Accelerated Vesting Date, those portions of the Option and any Additional Options

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that remain unvested on the Date of Termination shall be subject to continued vesting in accordance with the terms of the applicable grant agreement for an additional 18 months after the Date of Termination (the last day of such 18-month period, the "Vesting Termination Date"). Any shares subject to the Option or to one of the Additional Options that are exercisable on the Date of Termination or that become exercisable thereafter shall remain exercisable until the earlier of (y) three months after the Vesting Termination Date and (z) the date on which the option to which those shares are subject would otherwise expire.

(ii) Conditions to Eligibility for Severance Benefits. The provisions of clauses (A) through (E) of Section 5(d) (i) hereof are referred to in the aggregate hereafter as the "Severance Benefits." The obligation of the Company to provide the Executive the Severance Benefits, or any of them, is conditioned on the Executive signing and returning a timely and effective release of claims in the form attached to this Agreement and marked Exhibit A (the "Release of Claims"), such that the Release of Claims becomes effective and irrevocable prior to the expiration of sixty (60) calendar days from the Date of Termination, and on the Executive continuing to meet his obligations under the Employee Agreement in accordance with its terms from and following the Date of Termination. The Release of Claims that is required in order for the Executive to qualify for the Severance Benefits in accordance with Section 5(d) and Section 5(e) of this Agreement, for the Enhanced Separation Pay and certain of the Severance Benefits in accordance with Section 5(g) hereof creates legally binding obligations on the part of the Executive. Therefore, the Company advises the Executive to consult an attorney before signing the Release of Claims in any of the foregoing circumstances.

(e) By the Executive for Good Reason.

(i) The Executive may terminate his employment hereunder for Good Reason during the Term of this Agreement (A) by providing notice to the Company specifying in reasonable detail the condition giving rise to the Good Reason no later than thirty (30) days following the occurrence of that condition; (B) by providing the Company thirty (30) days to remedy the condition and so specifying in the notice and (C) by terminating his employment for Good Reason within thirty (30) days following the expiration of the period to remedy if the Company fails to remedy the condition.

(ii) For purposes of this Agreement, "Good Reason" shall mean the occurrence of any one or more of the following conditions without the Executive's consent: (A) failure of the Company to appoint or elect the Executive as President, Chief Executive Officer and Chairman in accordance with Section 3(a) hereof or to continue the Executive in those positions and offices at any time during the Term of this Agreement following such appointment or election; (B) a material adverse change in the Executive's duties, authority and/or responsibilities that, taken as a whole, effectively constitutes a demotion; (C) other material breach of this Agreement by the Company, including a material reduction in the Base Salary or Target Bonus; or (D) the relocation of the office to

which the Executive is assigned to a place thirty-five (35) or more miles away from Cambridge, Massachusetts or Fan Pier, Boston, Massachusetts and such

relocation is not at the Executive's request or with the Executive's prior agreement and is other than in connection with a change in location of the Company's principal executive offices; provided, however, that the Company's failure to continue the Executive's appointment or election as a director or officer of any of its Affiliates, a change in reporting relationships resulting from the direct or indirect control of the Company (or a successor corporation) by another Person and any diminution of the business of the Company or any of its Affiliates or any sale or transfer of equity, property or other assets of the Company or any of its Affiliates shall not constitute Good Reason. Notwithstanding clause (B) of the definition of Good Reason and the proviso to that definition, however, in the event there occurs a Change of Control (defined in Section 5(g)(iii) hereof) and a resulting change in the Executive's reporting relationship, without the Executive's consent, such that the Executive is reporting to an executive officer of a parent entity, rather than to the board of directors of the Company (or a successor corporation) or to the board of directors of a parent thereof, any material erosion of the Executive's independent authority shall in itself constitute Good Reason for termination; provided that the Executive complies with Section 5(e)(i) hereof and such termination for Good Reason occurs within two years of such Change of Control and, further, with the understanding and agreement that the fact that there has been a change in the Executive's reporting relationship shall not itself constitute an erosion of the Executive's independent authority.

(iii) In the event of termination of the Executive's employment for Good Reason during the Term of this Agreement in accordance with this Section 5(e), the Company shall (i) pay to the Executive any Final Compensation that is due, such payment to be made on the next regular payroll date of the Company; and (ii) shall pay the Executive any Annual Bonus earned for the fiscal year immediately preceding that in which termination occurs, if unpaid on the Date of Termination, which Annual Bonus shall be payable on the date annual bonuses for that immediately preceding fiscal year are paid to Company executives generally. In addition, the Executive shall be entitled to receive the Severance Benefits on the same terms as would have applied had his employment been terminated by the Company other than for Cause in accordance with Section 5(d) above; provided that the Executive satisfies all conditions to such entitlement set forth in Section 5(d)(ii) hereof, which include his signing and return of a timely and effective Release of Claims and his continuing to meet his obligations under the Employee Agreement in accordance with its terms.

(f) By the Executive other than for Good Reason. The Executive may terminate his employment hereunder other than for Good Reason at any time during the Term of this Agreement upon sixty (60) days' notice to the Company. In the event of termination of the Executive's employment pursuant to this Section 5(f), the Board may elect to waive the period of notice, or any portion thereof, and, if the Board so elects, the Company shall pay the Executive the Base Salary for the initial sixty (60) days of the notice period (or for any remaining portion of such initial period). In the event of termination hereunder, following the Date of Termination, the Company shall pay to the Executive any Final Compensation that is due, such payment to be made on the next regular payroll date of the Company. Any equity granted the Executive

pursuant to Section 4(c) hereof shall be governed by that Section 4(c) and by the Stock and Option Plan or any successor plan, any applicable agreements and any applicable Company securities trading policies, provided, however, that if the Executive terminates his employment under this Section 5(f) and the Date of Termination is on or after January 31, 2016, the Option and any Additional Options that are vested on the Date of Termination shall remain exercisable until the earlier of (i) the end of the 18 month period following the Date of Termination and (ii) the date on which the option to which those shares are subject would otherwise expire. The Executive's right to exercise the Option and any Additional Options in the preceding sentence shall survive the termination of this Agreement. The Company shall have no obligation or liability to the Executive under this Agreement, other than as expressly set forth in this Section 5(f).

(g) Upon a Change of Control.

(i) If a Change of Control occurs during the Term of this Agreement and, at the time of such occurrence, or within the earlier of two (2) years thereafter and the Expiration Date, the Company terminates the Executive's employment other than for Cause in accordance with Section 5(d) hereof or the Executive terminates his employment for Good Reason in accordance with Section 5(e), following the Date of Termination, the Company shall (i) pay to the Executive any Final Compensation that is due, such payment to be made on the next regular payroll date of the Company; and (ii) pay the Executive any Annual Bonus earned for the fiscal year immediately preceding that in which termination occurs, if unpaid on the Date of Termination, which Annual Bonus shall be payable on the date annual bonuses for that immediately preceding fiscal year are paid to Company executives generally. In addition, provided that the Executive meets all conditions to eligibility for the Severance Benefits as set forth in Section 5(d)(ii) hereof, the Executive shall be entitled to receive the Severance Benefits on the same terms as would have applied had his employment been terminated by the Company other than for Cause or by the Executive for Good Reason prior to the occurrence of a Change of Control under Section 5(d)(i) hereof, except that (I) in lieu of providing the Executive Severance Pay during the Severance Pay Period in accordance with clause (A) of Section 5(d)(i), the Company, subject to Section 5(h)(i) hereof, shall pay the Executive, on the Company's next regular payday for its executives that follows the expiration of sixty (60) calendar days from the Date of Termination, a single lump sum payment equal to 2.99 times the sum of the Base Salary (at the annual rate) and the Target Bonus (the "Enhanced Separation Pay"); (II) in lieu of the premium contributions that the Company would otherwise have provided under clause (B) of Section 5(d)(i) for participation by the Executive and his eligible dependents in the Company's or its successor's group health, dental and vision plans (to the extent offered by the Company) under COBRA, the Company shall pay the full premium cost and any required administrative fee for the duration specified in Section 5(d)(i)(B) (provided that if this payment arrangement would cause any of the Company's or its successor's group health, dental or vision plans to fail the non-discrimination testing required by Section 105(h) of the Code, the Company or its successor may, in its sole discretion, require that the contributions made by the Company or its successor be made on a taxable basis); (III) in

lieu of the accelerated vesting and other treatment provided under clause (D) of Section 5(d)(i), to the extent such awards remain unvested and outstanding on the Date of Termination, the Cliff-Vested Restricted Stock, the Performance Restricted Stock (excluding any shares that shall have been forfeited prior to the Date of Termination for earlier failure to achieve a specified performance objective) and any additional restricted stock award granted to the Executive under Section 4(c)(iv) of this Agreement shall vest in full on the Accelerated Vesting Date; and (IV) in lieu of the accelerated vesting provided under clause (E) of Section 5(d)(i), any portion of the Option and any Additional Options that are unvested on the Date of Termination and have not yet expired in accordance with their terms shall vest in full and become exercisable on the Accelerated Vesting Date and shall remain exercisable until the earlier of the (y) end of the three (3) month period following the Date of Termination and (z) the date on which the option to which those shares are subject (whether it be the Option or one of the Additional Options) would otherwise expire..

(ii) A “Change of Control” shall be deemed to take place if hereafter any “Person” or “group” as such terms are used in Sections 13(d) and 14(d)(2) of the Securities Exchange Act of 1934 (the “Act”), becomes a beneficial owner, as such term is used in Rule 13d-3 promulgated under the Act, of securities of the Company representing more than fifty percent (50%) of the combined voting power of the outstanding securities of the Company having the right to vote in the election of directors; or (b) all or substantially all the business or assets of the Company are sold or disposed of, or the Company or a subsidiary of the Company combines with another company pursuant to a merger, consolidation, or other similar transaction, other than (i) a transaction solely for the purpose of reincorporating the Company or one of its subsidiaries in a different jurisdiction or recapitalizing or reclassifying the Company’s stock; or (ii) a merger or consolidation in which the shareholders of the Company immediately prior to such merger or consolidation continue to own at least a majority of the outstanding voting securities of the Company or the surviving entity immediately after the merger or consolidation, provided further that in each of the foregoing cases, the Change of Control also meets all of the requirements of a “change in the ownership of a corporation” within the meaning of Treasury Regulation §1.409A-3(i)(5)(v), a “change in the effective control of a corporation” within the meaning of Treasury Regulation §1.409A-3(i)(5)(vi) or a “a change in the ownership of a substantial portion of the corporation’s assets” within the meaning of Treasury Regulation §1.409A-3(i)(5)(vii).

(iii) The Company shall promptly reimburse the Executive for the amount of all reasonable attorneys’ fees and expenses incurred by the Executive during the period commencing on the effective date of the Change of Control and ending on the sixth (6th) anniversary of the Date of Termination in seeking to obtain or enforce any right or benefit provided the Executive under this Section 5(g).

(iv) To the extent that the Enhanced Severance Payment, the other benefits and payments to be provided under Section 5(g)(i), or any other type of benefit or payment made to the Executive or for his benefit by the Company or any of its

affiliates, whether paid or payable, provided or to be provided, or distributed or distributable pursuant to the terms of this Agreement or otherwise (collectively, the “Total Payments”) would be subject to the excise tax imposed under Section 4999 of the Code, the Total Payments shall be reduced so that the maximum value of the Total Payments (after reduction) shall be one dollar (\$1.00) less than the amount that would cause the Total Payments to be subject to the excise tax imposed by Section 4999 of the Code, provided that no reduction in the Total Payments shall be made if the net after-tax amount of the Total Payments retained by the Executive after reduction are less than the net-after tax amount of the Total Payments retained by the Executive without any reduction under this Section 5(g)(iv). If the Total Payments are subject to reduction under this Section 5(g)(iv), the Company shall reduce or eliminate the Total Payments by first reducing or eliminating the Enhanced Severance Payment (with the payments to be made furthest in the future being reduced first), then by reducing or eliminating any accelerated vesting of the Option or any Additional Options, then by reducing or eliminating any accelerated vesting of the Cliff-Vest Restricted Stock, then by reducing or eliminating any accelerated vesting of the Performance Restricted Stock and finally by reducing or eliminating any other remaining Total Payments. The preceding provisions of this Section shall take precedence over the provisions of any other plan, arrangement or agreement governing the Executive’s rights and entitlements to any benefits or compensation. Any determination that the Total Payments must be reduced in accordance with Section and the assumptions to be utilized in arriving at such determination, shall be made by the Board in the exercise of its reasonable, good faith discretion based upon the advice of such professional advisors it may deem appropriate in the circumstances.

(h) Timing of Payments and Section 409A.

(i) To the extent that this Agreement provides for the payment of non-qualified deferred compensation benefits in connection with a termination of the Executive’s employment (regardless of the reason for such termination), such termination of the Executive’s employment triggering payment of benefits under the terms of this Agreement must also constitute a “separation from service” under Section 409A(a)(2)(A)(i) of the Code and Treas. Reg. §1.409A-1(h) before the Company shall make payment of such benefits. To the extent that termination of the Executive’s employment does not constitute a separation of service under Section 409A(a)(2)(A)(i) of the Code and Treas. Reg. §1.409A-1(h) (as the result of further services that are reasonably anticipated to be provided by him to the Company or any of its Affiliates or successors at the time his employment terminates), any benefits payable under this Agreement that constitute non-qualified deferred compensation under Section 409A of the Code shall be delayed until after the date of a subsequent event constituting a separation of service under Section 409A(a)(2)(A)(i) of the Code and Treas. Reg. §1.409A-1(h). For purposes of clarification, this Section 5(h)(i) shall not cause any forfeiture of benefits on the Executive’s part, but shall only act as a delay in payment of such benefits until such time as a separation from service occurs.

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(ii) If, at the time of the Executive’s “separation from service” with the Company other than as a result of the Executive’s death: (A) the Executive is a “specified employee” (as defined in Section 409A(a)(2)(B)(i) of the Code and Treas. Regs. §1.409A-1(i)), (B) one or more of the payments or benefits received or to be received by the Executive pursuant to this Agreement would constitute non-qualified deferred compensation subject to Section 409A, and (C) the deferral of the commencement of any such payments or benefits otherwise payable hereunder as a result of such separation from service is necessary in order to prevent any accelerated or additional tax under Section 409A, then the Company will defer the commencement of the payment of any amounts otherwise due to the extent necessary (without any reduction in such payments or benefits ultimately paid or provided to the Executive) until the earlier of (w) the business day following the last day of the sixth month after the month in which the Date of Termination occurs, or if later, the date of the Executive’s separation from service with the Company occurs, and (x) the date of the Executive’s death, but only to the extent necessary to avoid such penalties under Section 409A of the Code. On the earlier of (y) the business day following the last day of the sixth month after the month in which the Date of Termination occurs, or if later, the Executive’s separation from service with the Company occurs, and (z) the Executive’s death, the Company shall pay the Executive (or his estate) in a lump sum the aggregate value of the non-qualified deferred compensation that the Company otherwise would have paid the Executive prior to that date under this Agreement.

(iii) Each installment payment to be provided to the Executive under this Agreement shall be a separate “payment” within the meaning of Treasury Regulation section 1.409A-2(b)(2)(i).

(i) Post Agreement Employment. If the Executive remains in the employ of the Company or any of its Affiliates following the termination of this Agreement, whether by expiration of the Term of this Agreement or otherwise, then such employment shall be at will. Notwithstanding the foregoing, however, Sections 5(d) and (h) of this Agreement shall survive its termination and the Executive shall receive the benefits provided under Section 5(d) of this Agreement, subject to the terms and conditions of Sections 5(d) and (h), if the Company subsequently terminates the Executive’s employment other than for Cause.

6. Effect of Termination. The provisions of this Section 6 shall apply to any termination, whether due to the expiration of the Term of this Agreement, termination pursuant to Section 5 or otherwise.

(a) Payment by the Company of any Final Compensation due to the Executive and provision of any Severance Pay or Enhanced Separation Pay and any other Severance Benefits if due the Executive under the applicable termination provision of Section 5 and any accelerated vesting to which the Executive is entitled under Section 4(c)(iv) shall constitute the entire obligation of the Company to the Executive under this Agreement.

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(b) Except for any right of the Executive and his eligible dependents to continue participation in any medical, dental or vision plan offered by the Company in accordance with applicable law, the Executive's participation in Employee Benefit Plans of the Company shall terminate pursuant to the terms of each applicable Employee Benefit Plan based on the Date of Termination without regard to Severance Pay, Enhanced Separation Pay or pay for notice period waived or any other payment to the Executive following the Date of Termination.

(c) Provisions of this Agreement, including without limitation Sections 5(d), 5(f) and 5(h), shall survive any termination if so provided herein or if necessary or desirable to accomplish the purposes of other surviving provisions. Further, the Employee Agreement shall survive termination of the Executive's employment howsoever occurring in accordance with the terms thereof, provided, however, that solely in the event that the Executive resigns his employment for Good Reason in accordance with Section 5(e)(ii)(A) of this Agreement because the Board does not elect the Executive to serve as Chairman following the 2012 Annual Meeting in accordance with Section 3(a) of this Agreement, the Executive shall not be bound by Section 4(a) of the Employee Agreement. The obligation of the Company to make payments of Severance Pay or Enhanced Separation Pay, to provide other Severance Benefits to the Executive under Section 5(d), 5(e) or 5(g) hereof and to provide accelerated vesting under Sections 5(d), 5(e) or 5(g) hereof of the Options, the Additional Options, the Cliff-Vest Restricted Stock, the Performance Restricted Stock and other equity awards made under 4(c)(iv) is expressly conditioned on the Executive's continued full performance of his obligations under the Employee Agreement. For purposes of clarity, if the Executive breaches any obligation under the Employee Agreement on or after the Date of Termination, the Company shall have no further obligation to pay to the Executive the Severance Pay or Enhanced Separation Pay, to provide other Severance Benefits to the Executive under Section 5(d), 5(e) or 5(g) hereof or to provide accelerated vesting under Sections 5(d), 5(e) or 5(g) hereof of the Options, the Additional Options, the Cliff-Vest Restricted Stock, the Performance Restricted Stock and other equity awards made under 4(c)(iv) and may seek recoupment of any payments or benefits made after such breach. The Executive recognizes that, except as expressly provided in Section 5(d) or 5(e) or 5(g), or in the case of payment for notice waived or Options and any Additional Options that remain exercisable following the Date of Termination pursuant to Section 5(f) hereof, no compensation is earned after termination of employment.

7. Conflicting Agreements. The Executive hereby represents and warrants that the execution of this Agreement and the performance of his obligations hereunder will not breach or be in conflict with any other agreement to which the Executive is a party or is bound and that the Executive is not now subject to any covenants against competition or similar covenants or any court order or other legal obligation that would affect the performance of his obligations hereunder. The Executive agrees not to disclose to or use on behalf of the Company or any of its Affiliates any proprietary information of a prior employer or other Person without such Person's consent.

8. Indemnification. The Company shall indemnify the Executive to the same extent as it indemnifies its other executive officers and members of its Board under its charter or

bylaws, as in effect from time to time. The Executive agrees to promptly notify the Company of any actual or threatened claim arising out of or as a result of his employment or any of his positions or offices held with the Company or his membership on the Board.

9. Definitions. Words or phrases which are initially capitalized or are within quotation marks shall have the meanings provided in this Section and as provided elsewhere herein. For purposes of this Agreement, the following definitions apply:

(a) “Additional Options” means stock options issued by the Company to the Executive other than the Option.

(b) “Affiliates” means all persons and entities directly or indirectly controlling, controlled by or under common control with the Company, where control may be by management authority, contract or equity interest.

(c) “Code” means the Internal Revenue Code of the United States.

(d) “Date of Termination” means the date the Executive’s employment with the Company terminates, regardless of the reason for such termination.

(e) “Final Compensation” means (i) Base Salary earned during the final payroll period of the Executive’s employment hereunder, through the Date of Termination, but not yet paid, (ii) pay at the rate of the Base Salary for any vacation earned but not used, through the Date of Termination and (iii) any business expenses incurred by the Executive but un-reimbursed on the Date of Termination, provided that such expenses and required substantiation and documentation are submitted prior to, or within sixty (60) days following, the Date of Termination and that such expenses are reimbursable under Section 4(f) hereof and Company policies.

(f) “Final Pro-Rated Bonus” means the sum that results from multiplying the Target Bonus the Executive would have earned for the fiscal year in which the Date of Termination occurs had he continued employment through the last day of that fiscal year, by a fraction, the numerator of which shall be the number of days the Executive was employed during the fiscal year, through the Date of Termination, and the denominator of which shall be 365.

(g) “Immediate Affiliates” means the Company’s direct and indirect subsidiaries, the Company’s direct and indirect parents and their direct and indirect subsidiaries (exclusive of the Company).

(h) Except as otherwise expressly provided in Section 5(g)(iii), “Person” means an individual, a corporation, a limited liability company, an association, a partnership, an estate, a trust and any other entity or organization, other than the Company or any of its Affiliates.

10. Clawback. The payment and benefits provided to the Executive under Section 4 of this Agreement, the Severance, Enhanced Severance and other Severance Benefits provided to

the Executive under Section 5 of this Agreement, and the Option, any Additional Options, the Cliff-Vest Restricted Stock, the Performance Restricted Stock or any other equity award made to the Executive under Section 4(c)(iv) shall be subject to and shall be deemed amended hereby to incorporate any policy adopted by the Company requiring the repayment of compensation paid to the Executive.

11. Stock Ownership and Transfer. The Executive's ownership and transfer of any shares of the Company's common stock that he receives in connection with the exercise of the Option or any Additional Options or the satisfaction of the vesting conditions of the Cliff-Vest Restricted Stock, the Performance Restricted Stock or any other equity award granted to the Executive under Section 4(c)(iv) of this Agreement shall be subject to and shall be deemed amended hereby to incorporate any policy that: (i) imposes any stock ownership guidelines or rules on the Company's officers or directors; or (ii) governs the transfer of shares of stock held by employees of the Company, as such policies may exist from time to time.

12. Withholding. All payments made by the Company under this Agreement shall be reduced by any tax or other amounts required to be withheld by the Company under applicable law.

13. Assignment. Neither the Company nor the Executive may make any assignment of this Agreement or any interest herein, by operation of law or otherwise, without the prior written consent of the other; provided, however, that the Company may assign its rights and obligations under this Agreement without the consent of the Executive in the event that the Executive is transferred to a position with any of the Affiliates or in the event that the Company shall hereafter effect a reorganization, consolidate with, or merge into, any Person or transfer all or substantially all of its properties or assets to any Person. This Agreement shall inure to the benefit of and be binding upon the Company and the Executive, their respective successors, executors, administrators, heirs and permitted assigns.

14. Severability. If any portion or provision of this Agreement shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

15. Waiver. No waiver of any provision hereof shall be effective unless made in writing and signed by the waiving party. The failure of either party to require the performance of any term or obligation of this Agreement, or the waiver by either party of any breach of this Agreement, shall not prevent any subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

16. Notices. Any and all notices, requests, demands and other communications provided for by this Agreement shall be in writing and shall be effective when delivered in person, consigned to a reputable national courier service or deposited in the United States mail,

postage prepaid, and addressed to the Executive at his last known address on the books of the Company or, in the case of the Company, at its principal place of business in Cambridge, Massachusetts, attention of the Senior Vice President of Human Resources with a copy to the Office of the General Counsel of the Company, or to such other address as either party may specify by notice to the other actually received.

17. Entire Agreement. This Agreement, the Employee Agreement, the Option Agreement, the Cliff-Vest Restricted Stock Agreement and the Performance Restricted Stock Agreement collectively constitute the entire agreement between the parties and supersede all prior communications, agreements and understandings, written or oral, with respect to the terms and conditions of the Executive's employment, all of which shall remain in full force and effect in accordance with their terms.

18. Amendment. This Agreement may be amended or modified only by a written instrument signed by the Executive and by an expressly authorized representative of the Board.

19. Compliance with Section 409A. The provisions of this Agreement are intended to not result in the imposition of additional tax or interest under Section 409A of the Code where applicable, and such provisions shall be interpreted and administered accordingly. If any provision of this Agreement is ambiguous such that one interpretation of the provision would not impose the excise tax under Section 409A and another interpretation of the provision would impose the excise tax under Section 409A, each party intends that this Agreement be interpreted so the excise tax would not be imposed. The Company and the Executive acknowledge that it may be desirable, in view of regulations or other guidance issued under Section 409A, to amend provisions of this Agreement to avoid the acceleration of tax or the imposition of additional tax under Section 409A and that the Company will not unreasonably withhold its consent to any such amendments that in its determination are (i) feasible and necessary to avoid adverse tax consequences under Section 409A for the Executive, and (ii) not adverse to the interests of the Company.

20. Headings and Counterparts. The headings and captions in this Agreement are for convenience only and in no way define or describe the scope or content of any provision of this Agreement. This Agreement may be executed in two or more counterparts, each of which shall be an original and all of which together shall constitute one and the same instrument.

21. Governing Law. This is a Massachusetts contract and shall be construed and enforced under and be governed in all respects by the laws of The Commonwealth of Massachusetts, without regard to the conflict of laws principles thereof.

[Remainder of page intentionally blank. Signature page follows immediately.]

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IN WITNESS WHEREOF, this Agreement has been executed as a sealed instrument by the Company, by its duly authorized representative, and by the Executive, as of the date first above written.

THE COMPANY:

THE EXECUTIVE:

VERTEX PHARMACEUTICALS
INCORPORATED

By: /s/ Matthew W. Emmens
Matthew W. Emmens
President, Chairman and CEO

/s/ Jeffrey M. Leiden
Jeffrey M. Leiden, M.D., Ph.D

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EXHIBIT A

RELEASE OF CLAIMS

FOR AND IN CONSIDERATION OF the severance benefits to be provided me in connection with the termination of my employment in accordance with the applicable provision of Section 5 of the employment agreement between me and Vertex Pharmaceuticals Incorporated (the "Company") effective as of December 14, 2011 (the "Agreement"), which are conditioned on my signing this Release of Claims, in addition to my continued compliance with the agreement between me and the Company captioned "Employee Non-Disclosure, Non-Competition and Inventions Agreement" of even date with the Agreement, and to which I am not otherwise entitled, I, on my own behalf and on behalf of my heirs, executors, administrators, beneficiaries, representatives and assigns, and all others connected with or claiming through me, hereby release and forever discharge the Company and its Affiliates (as defined in the Agreement) and all of their respective past, present and future officers, directors, shareholders, employees, agents, general and limited partners, members, managers, joint venturers, representatives, successors and assigns, and all others connected with any of them (collectively, the "Released"), both individually and in their official capacities, from any and all causes of action, rights or claims of any type or description, whether known or unknown, that I have had in the past, now have, or might now have, through the date of my signing of this Release of Claims, including without limitation any causes of action, rights or claims in any way resulting from, arising out of or connected with my employment by the Company or any of its Affiliates or the termination of that employment or pursuant to any federal, state or local law, regulation or other requirement (including without limitation Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, the Americans with Disabilities Act, and the fair employment practices laws of the state or states in which I have been employed by the Company or any of its Affiliates, each as amended from time to time).

Excluded from the scope of this Release of Claims is (i) any claim arising under an applicable provision of Section 5 of the Agreement after the effective date of this Release of Claims and (ii) any right of indemnification or contribution that I have pursuant to the charter or by laws of the Company.

In signing this Release of Claims, I acknowledge my understanding that I may not sign it prior to the termination of my employment, but that I may consider the terms of this Release of Claims for up to twenty-one (21) days (or such longer period as the Company may specify) from the date my employment with the Company terminates. I also acknowledge that I have been advised by the Company, as set forth in Section 5(d) of the Agreement, to consult an attorney prior to signing this Release of Claims; that I have had a full and sufficient time to consider this Release of Claims and to consult with an attorney, if I wished to do so, or to consult with any other person of my choosing before signing; and that I am signing this Release of Claims voluntarily and with a full understanding of its terms. I further acknowledge that, in signing this Release of Claims, I have not relied on any promises or representations, express or implied, other than those set forth expressly in the Agreement.

I understand that I may revoke this Release of Claims at any time within seven (7) days of the date of my signing by written notice to the Senior Vice President of Human Resources of the Company or such other person whom the Board of Directors of the Company may designate and that this Release of Claims shall not take effect until the eighth (8th) calendar day following the date of my signing and then only if I have not revoked it during the preceding seven (7) calendar days.

Intending to be legally bound, I have signed this Release of Claims under seal as of the date written below.

Signature: _____
Jeffrey M. Leiden, M.D., Ph.D.

Date Signed: _____

EMPLOYEE NON-DISCLOSURE, NON-COMPETITION & INVENTIONS AGREEMENT

This Agreement made and entered into in Cambridge, Massachusetts, by Jeffrey M. Leiden, M.D., Ph.D. (the “Executive”) and Vertex Pharmaceuticals Incorporated (the “Company”), effective as of the Executive’s first day of employment with the Company, on the 14th day of December, 2011.

WHEREAS, the Employee acknowledges the importance to Vertex Pharmaceuticals Incorporated (the “Company”) and its Affiliates (as hereafter defined) of protecting the valuable Confidential Information (as hereafter defined) and goodwill that they have developed or acquired and their other legitimate interests.

NOW, THEREFORE, in consideration of his initial employment with the Company and in consideration of his being granted access to trade secrets and other confidential information of the Company and its Affiliates and for other good and valuable consideration, the receipt and sufficiency of which he hereby acknowledges, the Executive hereby agrees with the Company as follows:

1. Confidentiality. The Executive acknowledges that the Company and its Affiliates continually develop Confidential Information; that the Executive may develop Confidential Information for the Company and its Affiliates; and that the Executive has learned and will continue to learn of Confidential Information while serving as a member of the board of directors of the Company (the “Board”) and will learn of Confidential Information hereafter during the course of employment with the Company. The Executive shall comply with the policies and procedures of the Company for protecting Confidential Information and shall not disclose to any Person (as hereafter defined) or use, other than as required for the proper performance of his duties and responsibilities to the Company and its Affiliates, or as required by applicable law after notice to the Company and a reasonable opportunity for the Company to seek protection of the Confidential Information prior to disclosure, any Confidential Information obtained by the Executive incident to his employment or other association with the Company or any of its Affiliates. The Executive understands and agrees that these restrictions shall continue to apply after his employment with the Company terminates, regardless of the reason for such termination. The confidentiality obligation under this Section 1 shall not apply to information that is generally known or readily available to the public at the time of disclosure to the Executive or that becomes generally known or readily available to the public thereafter through no wrongful act on the part of the Executive or any other Person having an obligation of confidentiality to the Company or any of its Affiliates.

2. Return of Company Property. All documents, records, tapes and other media of every kind and description relating to the business, present or otherwise, of the Company or any of its Affiliates and any copies, in whole or in part, thereof (the “Documents”), whether or not prepared by the Executive, shall be the sole and exclusive property of the Company and its Affiliates. The Executive shall safeguard all Documents and shall surrender to the Company at

the time his employment terminates, or at such earlier time or times as the Board or its designee may specify, all Documents and all other property of the Company and its Affiliates then in the Executive's possession or control.

3. Assignment of Rights to Intellectual Property . The Executive shall promptly and fully disclose to the Company all Intellectual Property (as defined in Section 8 hereof). The Executive hereby assigns and agrees to assign to the Company (or as otherwise directed by the Company) the Executive's full right, title and interest in and to all Intellectual Property. The Executive agrees to execute any and all applications for domestic and foreign patents, copyrights or other proprietary rights and to do such other acts (including without limitation the execution and delivery of instruments of further assurance or confirmation) requested by the Company to assign the Intellectual Property to the Company and to permit the Company to enforce any patents, copyrights or other proprietary rights to the Intellectual Property. The Executive will not charge the Company for time spent in complying with these obligations. All copyrightable works that the Executive creates shall be considered "work made for hire" and shall, upon creation, be owned exclusively by the Company.

4. Restricted Activities . The Executive agrees that the following restrictions on his activities during and after his employment are necessary to protect the goodwill, Confidential Information and other legitimate interests of the Company and its Affiliates:

(a) While the Executive is employed by the Company and for eighteen (18) months after his employment terminates, regardless of the basis of such termination, except as otherwise provided in Section 6(c) of the Executive's employment agreement with the Company of even date herewith, the Executive shall not, directly or indirectly, whether as owner, partner, investor, consultant, agent, employee, co-venturer or otherwise, (i) compete with the Company or any of its Immediate Affiliates (as defined in Section 8 hereof) within the United States or in any other country in which the Company or any of its Immediate Affiliates markets, or is in active planning to market, any of the Products or otherwise conducts or is in active planning to conduct business; (ii) undertake any planning for any business competitive with the Products of the Company or any of its Immediate Affiliates; or (iii) compete, or undertake any planning to compete with, the Exclusive Licensees (as also defined in Section 8) with respect to those Products as to which the Exclusive Licensees are licensed by the Company or any of its Immediate Affiliates in those geographic areas covered by those licenses. Specifically, but without limiting the foregoing, the Executive agrees not to engage in any manner in any activity that is directly or indirectly competitive or potentially competitive with the Products or with any of the other business activities of the Company or any of its Immediate Affiliates conducted or under consideration at any time during the Executive's employment or his service on the Board and further agrees not to work or provide services, in any capacity, whether as an employee, independent contractor or otherwise, whether with or without compensation, for or to any Person who is engaged in any business that is competitive with the business of the Company or any of its Immediate Affiliates or any of the Exclusive Licensees (with respect to the Products licensed), as conducted or in planning during the Executive's employment. For the purposes of this Section 4, the business of the Company and its Immediate Affiliates and the Exclusive Licensees shall include all Products and the Executive's undertaking shall encompass all items, products and services that may be used in substitution for Products. The foregoing, however, shall not prevent the Executive's passive ownership of two percent (2%) or less of the equity

securities of any publicly traded company; nor in any way limit him in the performance of his duties as a member of the boards of directors of companies previously disclosed to the Company or otherwise approved by the Board of Directors of the Company.

(b) The Executive agrees that, during his employment with the Company, he will not undertake any outside activity, whether or not competitive with the business of the Company or any of its Immediate Affiliates, that could reasonably give rise to a conflict of interest or otherwise interfere with any of his duties, responsibilities or obligations to the Company or any of its Immediate Affiliates.

(c) The Executive agrees that, during his employment with the Company and during the eighteen (18) months immediately following termination of his employment, regardless of the basis of such termination, the Executive will not directly or indirectly (a) solicit or encourage any customer or prospective customer of the Company or any of its Immediate Affiliates or any of their Exclusive Licensees to terminate or diminish its relationship with the Company or any of its Immediate Affiliates; (b) seek to persuade any such customer or prospective customer of the Company or any of its Immediate Affiliates or any Exclusive Licensee to conduct with the Executive or any other Person any business or activity that such customer, prospective customer or Exclusive Licensee conducts or could conduct with the Company or any of its Immediate Affiliates or (c) solicit or encourage any customer or prospective customer of any of the Exclusive Licensees for any of the Products to terminate or diminish such business with the Exclusive Licensees or to conduct such business with the Executive or any other Person; provided that these restrictions shall apply after termination of the Executive's employment with the Company (y) only with respect to those Persons who are or have been Exclusive Licensees or who are or have been a customer or potential customer of the Company or any of its Immediate Affiliates or the Exclusive Licensees at any time within the twelve (12) month period immediately preceding the Date of Termination or whose business has been solicited on behalf of the Company or any of its Immediate Affiliates or any of the Exclusive Licensees by any of their employees or agents within said twelve (12) month period, other than by form letter, blanket mailing or published advertisement, and (z) only if the Executive has been introduced to, or otherwise had contact with, such Person as a result of his employment or other associations with the Company or one of its Immediate Affiliates or one of their Exclusive Licensees or has had access to Confidential Information that would assist in the Executive's solicitation of such Person in competition with the Company or one of its Immediate Affiliates or one of the Exclusive Licensees.

(d) The Executive agrees that during his employment (except in the course of his duties on behalf of the Company or any of its Immediate Affiliates) and during the eighteen (18) month period immediately following termination of his employment, regardless of the basis for such termination, the Executive will not, and will not assist any other Person to, (a) hire or solicit for hiring any employee of the Company or any of its Immediate Affiliates or any of the Exclusive Licensees or seek to persuade any employee of the Company or any of its Immediate Affiliates or any of the Exclusive Licensees to discontinue employment or (b) solicit or encourage any independent contractor providing services to the Company or any of its Immediate Affiliates or any of the Exclusive Licensees to terminate or diminish its relationship with them. For the purposes of the Executive's obligations hereunder following termination of his employment with the Company, an "employee" of the Company or any of its Immediate

Affiliates or any of the Exclusive Licensees or an “independent contractor” providing services to the Company or any of its Immediate Affiliates or any of the Exclusive Licensees is any Person who was such at any time during the twelve (12) months preceding the Date of Termination.

5. Notification Requirement . During the eighteen (18) months immediately following the Date of Termination, the Executive shall give notice to the Company prior to beginning employment or a consulting position stating the name and address of the Person for whom such employment or consulting is undertaken and the nature of the Executive’s position with such Person. The Executive agrees to also provide the Company with such other pertinent information as the Company may reasonably request in order to determine the Executive’s continued compliance with his surviving obligations under Sections 1, 3 and 4 hereof.

6. Enforcement of Covenants . The Executive acknowledges that he has carefully read and considered all the terms and conditions of this Agreement, including the restraints imposed on him pursuant to Sections 1, 3 and 4 hereof. The Executive agrees without reservation that each of the restraints contained herein is necessary for the reasonable and proper protection of the goodwill, Confidential Information and other legitimate interests of the Company and its Immediate Affiliates; that each and every one of those restraints is reasonable in respect to subject matter, length of time and geographic area; and that these restraints, individually or in the aggregate, will not prevent him from obtaining other suitable employment during the period in which the Executive is bound by these restraints. The Executive further agrees that he will not assert, or permit to be asserted on his behalf, in any forum, any position contrary to the foregoing. The Executive further acknowledges that, were he to breach any of the covenants contained in Section 1, 3 or 4 hereof, the damage to the Company would be irreparable. The Executive therefore agrees that the Company, in addition to any other remedies available to it, shall be entitled to preliminary and permanent injunctive relief against any breach or threatened breach by the Executive of any of said covenants, without having to post bond. The parties further agree that, in the event that any provision of Section 1, 3 or 4 hereof shall be determined by any court of competent jurisdiction to be unenforceable by reason of its being extended over too great a time, too large a geographic area or too great a range of activities, such provision shall be deemed to be modified to permit its enforcement to the maximum extent permitted by law.

7. Conflicting Agreements . The Executive hereby represents and warrants that the execution of this Agreement and the performance of his obligations hereunder will not breach or be in conflict with any other agreement to which the Executive is a party or is bound and that the Executive is not now subject to any covenants against competition or similar covenants or any court order or other legal obligation that would affect the performance of his obligations hereunder. The Executive agrees not to disclose to or use on behalf of the Company or any of its Affiliates any proprietary information of a prior employer or other Person without such Person’s consent.

8. Definitions . Words or phrases which are initially capitalized or are within quotation marks shall have the meanings provided in this Section and as provided elsewhere herein. For purposes of this Agreement, the following definitions apply:

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(a) “Affiliates” means all persons and entities directly or indirectly controlling, controlled by or under common control with the Company, where control may be by management authority, contract or equity interest.

(b) “Confidential Information” means any and all information of the Company and its Affiliates that is not generally known by Persons with whom the Company or any of its Affiliates competes or does business, or with whom the Company or any of its Affiliates plans to compete or do business and any and all information, publicly known in whole or in part or not, that, if disclosed by the Company or any of its Affiliates, would assist in competition against them. Confidential Information includes without limitation such information relating to (i) the development, research, testing, manufacturing, marketing and financial activities of the Company and its Affiliates, (ii) the Products, (iii) the costs, sources of supply, financial performance and strategic plans of the Company and its Affiliates, (iv) the identity and special needs of the customers of the Company and its Affiliates and (v) the people and organizations with whom the Company and its Affiliates have business relationships and the nature and substance of those relationships. Confidential Information also includes any and all information received by the Company or any of its Affiliates belonging to any customer or other Person with any understanding, express or implied, that the information would not be disclosed.

(c) “Date of Termination” means the date the Executive’s employment with the Company terminates, regardless of the reason for such termination, and, for the avoidance of doubt, whether occurring pursuant to the employment agreement between the Company and the Executive of even date herewith or otherwise.

(d) “Exclusive Licensees” means those Persons licensed by the Company and/or by one or more of its Immediate Affiliates to distribute in specific geographic areas one or more of the Products.

(e) “Immediate Affiliates” means the Company’s direct and indirect subsidiaries, the Company’s direct and indirect parents and their direct and indirect subsidiaries.

(f) “Intellectual Property” means inventions, discoveries, developments, methods, processes, compositions, works, concepts and ideas (whether or not patentable or copyrightable or registrable under any comparable law or constituting trade secrets) conceived, made, created, developed or reduced to practice by the Executive (whether alone or with others, whether or not during normal business hours or on or off Company premises) during the Executive’s service on the Board or his employment with the Company or any of its Immediate Affiliates or that relate to the Products or to any prospective activity of the Company or any of its Immediate Affiliates or to any work performed by the Executive for the Company or any of its Immediate Affiliates or that make use of Confidential Information or any of the equipment or facilities of the Company or any of its Immediate Affiliates.

(g) “Person” means an individual, a corporation, a limited liability company, an association, a partnership, an estate, a trust and any other entity or organization, other than the Company or any of its Affiliates.

(h) “Products” mean all products planned, researched, developed, tested, manufactured, sold, licensed, leased or otherwise distributed or put into use by the Company or any of its Immediate Affiliates, together with all services provided or planned by the Company or any of its Immediate Affiliates, during the Executive’s employment or during the period of his service on the Board that preceded the Commencement Date.

9. Assignment. Neither the Company nor the Executive may make any assignment of this Agreement or any interest in it, by operation of law or otherwise, without the prior written consent of the other; provided, however, that the Company may assign its rights and obligations under this Agreement without the Executive’s consent in the event that the Company shall hereafter affect a reorganization, consolidate with, or merge into any Person or transfer to any Person all or substantially all of the business, properties or assets of the Company. This Agreement shall inure to the benefit of and be binding upon the Executive and the Company, and each of their respective successors, executors, administrators, heirs, representatives and permitted assigns. The Executive also agree that each of the Company’s Affiliates shall have the right to enforce all of his obligations to that Affiliate under this Agreement. The Executive hereby expressly consents to be bound by the provisions of this Agreement for the benefit of the Company and of any successor or permitted assign to whose employ the Executive may be transferred, without the necessity that this Agreement be re-signed at the time of such transfer.

10. Severability. If any portion or provision of this Agreement shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

11. Notices. Any and all notices, requests, demands and other communications provided for by this Agreement shall be in writing and shall be effective when delivered in person, consigned to a reputable national courier service or deposited in the United States mail, postage prepaid, and addressed to the Executive at his last known address on the books of the Company or, in the case of the Company, at its principal place of business in Cambridge, Massachusetts, attention of the Senior Vice President of Human Resources with a copy to the Office of the General Counsel of the Company, or to such other address as either party may specify by notice to the other actually received.

12. Not a Contract for a Fixed Term. The Executive acknowledges and agrees that this Agreement does not in any way obligate the Company to retain his services for a fixed period or at a fixed level of compensation; nor does it in any way restrict his right or that of the Company to terminate his employment at any time, with or without notice or cause.

13. Entire Agreement; Amendments; Waivers; Survival. This Agreement sets forth the entire agreement between the Executive and the Company and supersedes all prior and contemporaneous communications, agreements and understandings, written or oral, with respect to the subject matter hereof; provided, however, that this Agreement shall not terminate or supersede the employment agreement between the Executive and the Company of even date herewith; nor shall it supersede any confidentiality or other obligations the Executive may have

in connection with his service on the Board. This Agreement may not be modified or amended, and no breach shall be deemed to be waived, unless agreed to in writing by the Executive and an expressly authorized member of the Board. If any provision of this Agreement should, for any reason, be held invalid or unenforceable in any respect, it shall not affect any other provisions, and shall be construed by limiting it so as to be enforceable to the maximum extent permissible by law. Provisions of this Agreement shall survive any termination of the Executive's employment to the extent so provided in this Agreement or if necessary or desirable to accomplish the purpose of other surviving provisions.

14. Headings and Counterparts. The headings and captions in this Agreement are for convenience only and in no way define or describe the scope or content of any provision of this Agreement. This Agreement may be executed in two or more counterparts, each of which shall be an original and all of which together shall constitute one and the same instrument.

15. Governing Law. This is a Massachusetts contract and shall be construed and enforced under and be governed in all respects by the laws of The Commonwealth of Massachusetts, without regard to the conflict of laws principles thereof.

16. Executive's Representations. In signing this Agreement, the Executive represents and warrants to the Company that he has read and understood all of its terms; that he has had a full and reasonable opportunity to consider its terms and to consult with an attorney and any person of his choosing before signing, if he wished to do so; that he has not relied on any agreements or representations, express or implied, concerning the subject matter hereof that are not set forth expressly in this Agreement; and that he has signed this Agreement knowingly and voluntarily.

Intending to be legally bound hereby, the Executive has signed this Agreement under seal to take effect as of the date first written above.

THE EXECUTIVE:

Signature: /s/ Jeffrey M. Leiden
Jeffrey M. Leiden, M.D., Ph.D.

Accepted and Agreed:

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Matthew W. Emmens
Matthew W. Emmens
President, Chairman and CEO



VERTEX PHARMACEUTICALS INCORPORATED
130 WAVERLY STREET • CAMBRIDGE, MA 02139-4242
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<http://www.vrtx.com>

December 14, 2011

BY HAND

Mr. Matthew W. Emmens
P.O. Box 67506
Chestnut Hill, MA 02467

Re: Employment Transition Terms

Dear Matt:

On behalf of the Board of Directors, I would like to thank you for your years of service and many contributions to Vertex Pharmaceuticals Incorporated (the "Company"). During your tenure as the Company's President, Chief Executive Officer and Chairman, you have overseen the evolution of the Company to a profitable commercial enterprise and left many positive and lasting impressions on those who have worked for and with you. Your years of service have left Vertex even better positioned to deliver transformational medicines to patients.

Your employment by the Company as its President, Chief Executive Officer and Chairman is governed by the terms of an Agreement dated February 5, 2009 (the "Employment Agreement"). The Employment Agreement expires on May 22, 2012. After discussions in which the Company offered to extend the term of the Employment Agreement (until at least February 22, 2013) you have decided to allow the Employment Agreement to expire on May 22, 2012, and to end your employment with the Company on that date. While we are saddened by your decision to leave the Company's employ at the end of your employment term, we appreciate your ongoing commitment to a smooth transition as the Company's new Chief Executive Officer begins his tenure. The purpose of this letter agreement is to provide the terms of that transition. As you know, the Company has offered employment to Dr. Jeffrey Leiden to assume the positions of President and Chief Executive Officer, and to assume chairmanship of the Board of Directors after the Company's 2012 Annual Meeting. This letter agreement outlines the terms and conditions applicable to the expiration of the Employment Agreement and transition of your duties as President and Chief Executive Officer to Dr. Leiden.

1. You will continue to serve as President and Chief Executive Officer of the Company pursuant to the terms of the Employment Agreement until February 1, 2012. Effective February 1, 2012, to facilitate Dr. Leiden's transition, you will resign as the Company's President and Chief Executive Officer, remaining Chairman in an executive capacity.
2. You will continue to be employed as Executive Chairman through expiration of the Employment Agreement on May 22, 2012 and continue to serve as Chairman of the Board of the Company through the date of the Company's 2012 Annual Shareholders' Meeting, and you agree that it shall not be a breach of the Employment Agreement for the Board to elect Dr. Leiden to serve as Chairman of the Board at its meeting held on that date. Upon expiration of the Employment Agreement, you will resign from any other positions, offices and directorships that you may hold for any of the Company's Immediate Affiliates under Section 3(a) of the Employment Agreement.
3. Although the Employment Agreement provided for your resignation as a member of the Company's Board of Directors upon expiration of the employment term, we are pleased that you have agreed to continue to serve your current three-year term as a director of the Company pursuant to your election by the Company's shareholders at the 2011 Annual Shareholders' Meeting. The Company would like to defer those provisions of Section 3(a) of the Employment Agreement that require you to resign as a director unless and until the Board deems it in the Company's best interests. You agree that in such instance you will tender your resignation if requested.
4. Because the Employment Agreement is terminating on the Expiration Date and your employment with the Company will not continue beyond the Expiration Date, you will neither receive any severance under Section 5 of the Employment Agreement nor any accelerated vesting of the Option under Section 4(c)(iv) of the Employment Agreement.
5. Listed on Schedule A to this letter agreement are your awards currently outstanding under the Stock and Option Plan that remain subject to vesting requirements (the "Outstanding Equity Awards"). Schedule A will be amended to list any additional awards granted to you under the Stock and Option Plan following the date of this letter agreement. Pursuant to the terms of the Stock and Option Plan, while you continue to serve as a director of the Company, the Outstanding Equity Awards will continue to vest in accordance with the terms of each award. If the Board requests that you resign as a director prior to the end of your current term pursuant to Section 3 of this letter agreement, the Outstanding Equity Awards will continue to vest in accordance with the terms of each award through the normal expiration of your term as a director in 2014 and thereafter will remain exercisable for a period of ninety (90) calendar days. If you cease

to be a director for any other reason, your Outstanding Equity Awards will cease to vest immediately and thereafter be exercisable in accordance with the terms of each Outstanding Equity Award and the Stock and Option Plan.

6. In accordance with Section 6(c) of the Employment Agreement, the Employee Agreement shall remain in full force and effect in accordance with its terms.
7. This letter agreement is intended to clarify the transition of your employment in connection with the expiration of the Employment Agreement. Accordingly, the terms of this letter agreement shall be deemed to amend or modify the terms of the Employment Agreement and in the event of any conflict between this letter agreement and the Employment Agreement, this letter agreement will control. Except as expressly amended or modified by this letter agreement, the terms of the Employment Agreement shall remain in full force and effect.
8. Unless defined in this letter agreement, capitalized terms in this letter agreement shall have the meaning ascribed to them in the Employment Agreement.
9. This letter agreement may be amended and modified only by a written instrument signed by you and an expressly authorized representative of the Board.
10. This is a Massachusetts contract and shall be construed and enforced under and be governed in all respects by the laws of The Commonwealth of Massachusetts, without regard to its conflict of laws principles.

Please sign below and return a copy of this letter to the Company to accept the terms and conditions of this letter agreement.

Very truly yours,

/s/ Elaine Ullian

Elaine Ullian, Chair
Corporate Governance & Nominating Committee

Accepted and Agreed as of
December 14, 2011

/s/ Matthew W. Emmens

Matthew W. Emmens

SCHEDULE A

RSA AWARDS

<u>Grant Date</u>	<u>Granted</u>	<u>Vested</u>	<u>Unvested</u>
2/5/2009	134,129	0	134,129
2/4/2010	47,201	23,601	23,600
2/3/2011	47,201	0	47,201

STOCK OPTIONS

<u>Grant Date</u>	<u>Price</u>	<u>Vested</u>	<u>Unvested</u>	<u>Outstanding</u>
2/5/2009	\$ 33.550000	377,437	171,563	549,000
2/4/2010	\$ 39.050000	154,875	199,125	354,000
7/14/2010	\$ 33.820000	36,875	81,125	118,000
2/3/2011	\$ 38.800000	44,250	191,750	236,000
7/13/2011	\$ 51.750000	7,375	110,625	118,000

EMPLOYMENT AGREEMENT

This Employment Agreement (this “Agreement”) is made and entered into as of this 26th day of January, 2012, by and between Vertex Pharmaceuticals Incorporated, a Massachusetts corporation (together with its successors and assigns, the “Company”), and David T. “Ty” Howton (the “Executive”).

WITNESSETH

WHEREAS, the Company is employing the Executive as the Company’s Senior Vice President and Chief Legal Officer; and

WHEREAS, the Executive has been designated as a member of the Executive Team of the Company;

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein and for other good and valuable consideration, the receipt of which mutually is acknowledged, the Company and the Executive (each individually a “Party”, and together the “Parties”) agree as follows:

1. DEFINITIONS.

“Base Salary” shall mean the Executive’s base salary in accordance with Section 4 below.

“Board” shall mean the Board of Directors of the Company.

“Cause” shall mean (i) the Executive is convicted of a crime involving moral turpitude, (ii) the Executive commits a material breach of any provision of this Agreement not involving the performance or nonperformance of duties, or (iii) the Executive, in carrying out the Executive’s duties, acts or fails to act in a manner that is determined, in the sole discretion of the Board, after written notice of any such act or failure to act and a reasonable opportunity to cure the deficiency has been provided to the Executive, to be (A) willful gross neglect or (B) willful gross misconduct resulting, in either case, in material harm to the Company unless such act, or failure to act, was believed by the Executive, in good faith, to be in the best interests of the Company.

“Change of Control” shall have the meaning set forth in the Change of Control Agreement.

“Change of Control Agreement” shall mean the Amended and Restated Change of Control letter agreement between the Company and the Executive of even date herewith.

“Code” shall mean the Internal Revenue Code of 1986, as amended.

“Common Stock” shall mean the common stock of the Company.

“Disability” or “Disabled” shall mean a disability as determined under the Company’s long-term disability plan or program in effect at the time the disability first occurs, or if no such

plan or program exists at the time of disability, then a “disability” as defined under Section 22(e)(3) of the Code.

“ Effective Date ” shall mean January 26, 2012.

“ Good Reason ” shall mean that, without the Executive’s consent, one or more of the following events occurs:

- (i) the Executive’s Base Salary is decreased unless such reduction is part of an across-the-board proportionate reduction in the salaries of the Company’s senior management team; or
- (ii) the office to which the Executive is assigned is relocated to a place 35 or more miles away and such relocation is not at the Executive’s request or with the Executive’s prior agreement (and other than, for Executives assigned to the Company’s principal executive offices, in connection with a change in location of the Company’s principal executive offices);

provided that Good Reason shall not exist unless and until within 30 days after the event giving rise to Good Reason under either (i) or (ii) above has occurred, the Executive delivers a written termination notice to the Company stating that an event giving rise to Good Reason has occurred and identifying with reasonable detail the event that the Executive asserts constitutes Good Reason under either (i) or (ii) above and the Company fails or refuses to cure or eliminate the event giving rise to Good Reason on or within 30 days after receiving such notice. To avoid doubt, the termination of the Executive’s employment would become effective at the close of business on the thirtieth day after the Company receives the Executive’s termination notice, unless the Company cures or eliminates the event giving rise to Good Reason prior to such time.

“ Severance Payment ” shall mean an amount equal to the sum of the Base Salary in effect on the date of termination of Executive’s employment, plus the amount of the Target Bonus for the Executive for the year in which the Executive’s employment is terminated; provided, however, that if the Executive terminates the Executive’s employment for Good Reason based on a reduction in Base Salary, then the Base Salary to be used in calculating the Severance Payment shall be the Base Salary in effect immediately prior to such reduction in Base Salary.

“ Target Bonus ” shall mean the target cash bonus for which the Executive is eligible on an annual basis, at a level consistent with the Executive’s title and responsibilities, under the Company’s bonus program then in effect and applicable to the Company’s senior executives generally.

2. TERM OF EMPLOYMENT.

The Company hereby employs the Executive, and the Executive hereby accepts such employment, continuing until termination in accordance with the terms of this Agreement. The period during which the Executive is employed hereunder is referred to in this Agreement as the “ term of employment. ”

3. POSITION.

On the Effective Date, the Executive is employed as the Company’s Senior Vice President and Chief Legal Officer.

4. BASE SALARY.

The Executive's annualized Base Salary as of the date of this Agreement is \$400,000.00, payable in accordance with the regular payroll practices of the Company. The Base Salary shall be reviewed no less frequently than annually, and any changes thereto (which shall thereafter be deemed the Executive's Base Salary) shall be solely within the discretion of the Board.

5. TARGET BONUS PROGRAM.

During the term of employment, the Executive shall be eligible to participate in the Company's Target Bonus program (and other cash incentive compensation programs) applicable to the Company's senior executives, as any such programs are established and modified from time to time by the Board in its sole discretion, and in accordance with the terms of such program.

6. INCENTIVE COMPENSATION PROGRAMS.

During the term of employment, the Executive shall be eligible to participate in the Company's incentive compensation programs applicable to the Company's senior executives, as such programs may be established and modified from time to time by the Board in its sole discretion.

7. EMPLOYEE BENEFIT PROGRAMS.

During the term of employment, the Executive shall be entitled to participate in all employee welfare and pension benefit plans, programs and/or arrangements offered by the Company to its senior executives, as such plans, programs and arrangements may be amended from time to time, to the same extent and on the same terms applicable to other senior executives. Nothing in this section shall preclude the Company from amending or terminating any of its employee benefit plans, programs or arrangements.

8. VACATION.

During the term of employment, the Executive shall be entitled to paid vacation days each calendar year in accordance with the Company's vacation policy then in effect.

9. TERMINATION OF EMPLOYMENT.

(a) **Termination in Connection with a Change of Control** . To the extent the Executive is entitled, in connection with the Executive's termination of employment, to severance or other benefits under the Change of Control Agreement, the Executive shall not be entitled to corresponding benefits under this Section 9.

(b) **Termination by the Company for Cause; or Termination by the Executive without Good Reason**. If the Company terminates the Executive's employment for Cause, or if the Executive voluntarily terminates the Executive's employment, other than for Good Reason, death or Disability, the term of employment shall end as of the date specified below, and the Executive shall be entitled to the following:

- (i) Base Salary earned by Executive but not paid through the date of termination of Executive's employment under this Section 9 (b); and

- (ii) any amounts earned, accrued or owing to the Executive but not yet paid under Sections 5, 6, or 7 above.

Termination by Company for Cause shall be effective as of the date noticed by the Company. Voluntary termination by Executive other than for Good Reason, death or Disability shall be effective upon 90 days' prior written notice to the Company and shall not be deemed a breach of this Agreement.

(c) **Termination by the Company Without Cause; or Termination by the Executive for Good Reason.** If the Executive's employment is terminated by the Company without Cause (other than due to death or Disability), or is terminated by the Executive for Good Reason (in accordance with the notice and cure provisions set forth in the definition of "Good Reason" above), the Executive shall be entitled to the following (provided that, with respect to (iii) and (v) such amounts shall be subject to and in exchange for a general release of all claims against the Company, its subsidiaries, and their officers, directors, agents and representatives, which is executed by Executive and becomes enforceable and non-revocable within 60 days of the date of termination):

- (i) Base Salary earned by Executive but not paid through the date of termination of Executive's employment under this Section 9 (c);
- (ii) all incentive compensation awards earned by Executive but not paid prior to the date of termination of Executive's employment under this Section 9(c);
- (iii) a cash payment to the Executive in an amount equal to the Severance Payment, payable within ten days after the execution of a general release and expiration, without revocation, of any applicable revocation periods under the general release provided that if the 60-day period during which the release is required to become effective and irrevocable begins in one calendar year and ends in another calendar year, the Severance Payment shall not be made before the first day of the second calendar year;
- (iv) any amounts earned, accrued or owing to the Executive but not yet paid under Sections 5, 6 or 7 above;
- (v) if COBRA coverage is elected by the Executive, the Company shall pay the cost of insurance continuation premiums on the Executive's behalf (whether or not covered by COBRA) to continue standard medical, dental and life insurance coverage for the Executive (or the cash equivalent of same in the event the Executive is ineligible for continued coverage) until the earlier of:
 - (A) the date 12 months after the date the Executive's employment is terminated; or
 - (B) the date, or dates, on which the Executive receives equivalent coverage and benefits under the plans, programs and/or arrangements of a subsequent employer (such coverage and benefits to be determined on a coverage-by-coverage or benefit-by-benefit basis).

If Executive is a "specified employee" under Section 409A(a)(2)(B)(i) of the Code, any payment of "nonqualified deferred compensation" (as defined under Section 409A of the Code

and related guidance) attributable to a “separation from service” (as defined under Section 409A of the Code and related guidance) shall not commence until the first full business day that is more than six months after the applicable separation from service (“Deferred Payment Date”). Any payments that would otherwise have been made between the separation from service and the Deferred Payment Date, but for this paragraph, shall be made in a lump sum on the Deferred Payment Date. Payments that, in any case, are scheduled to be made after the Deferred Payment Date shall continue according to the applicable payment schedule. To the extent that the termination of the Executive’s employment does not constitute a separation of service under Section 409A(a)(2)(A)(i) of the Code (as the result of further services that reasonably are anticipated to be provided by the Executive to the Company at the time the Executive’s employment is terminated), the payment of any nonqualified deferred compensation will be further delayed until the date that is the first full business day that is more than six months after the date of a subsequent event constituting a separation of service under Section 409A(a)(2)(A)(i) of the Code.

10. ASSIGNABILITY; BINDING NATURE.

This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors, heirs (in the case of the Executive) and assigns. No rights or obligations of the Company under this Agreement may be assigned or transferred by the Company except that such rights or obligations may be assigned or transferred pursuant to a merger or consolidation in which the Company is not the continuing entity, or the sale or liquidation of all or substantially all of the assets of the Company; provided, however, that the assignee or transferee is the successor to all or substantially all of the assets of the Company and such assignee or transferee assumes the liabilities, obligations and duties of the Company, as contained in this Agreement, either contractually or as a matter of law.

11. REPRESENTATIONS.

The Company represents and warrants that it is fully authorized and empowered to enter into this Agreement, and that the performance of its obligations under this Agreement will not violate any agreement between it and any other person, firm or organization. The Executive represents and warrants that no agreement exists between her and any other person, firm or organization that would be violated by the performance of the Executive’s obligations under this Agreement.

12. INDEMNIFICATION; INSURANCE.

The Executive shall at all times be indemnified and eligible for advancement of expenses on the same basis as is provided for the Company’s other executive officers and in accordance with the provisions of the Company’s charter and by-laws then in effect. The Executive shall also be covered under all of the Company’s policies of liability insurance maintained for the benefit of its directors and officers on the same basis as is provided for its other executive officers.

13. ENTIRE AGREEMENT; TERMINATION.

This Agreement, the agreements referenced herein and the Employee Non-Disclosure, Non-Competition & Inventions Agreement between the Executive and the Company contain the entire understanding and agreement between the Parties concerning the subject matter hereof and

supersedes all prior agreements, understandings, discussions, negotiations and undertakings, whether written or oral, between the Parties with respect thereto. Subject to the terms of this Agreement, the Company shall be entitled to terminate the Executive's employment at any time, and the Executive may terminate the Executive's employment by the Company, at any time subject to the provisions of Section 9(b) of this Agreement, in each case by written notice provided in accordance with Section 20 of this Agreement.

14. AMENDMENT OR WAIVER.

No provision in this Agreement may be amended unless such amendment is agreed to in writing and signed by the Executive and an authorized officer of the Company provided that the Company may, without the Executive's consent, unilaterally adopt amendments that may be required so that this Agreement continues to comply with applicable law or regulations, including without limitation Section 409A of the Code, provided such amendments do not adversely affect the benefits to the Executive under this Agreement. No waiver by either Party of any breach by the other Party of any condition or provision contained in this Agreement to be performed by such other Party shall be deemed a waiver of a similar or dissimilar condition or provision at the same or any prior or subsequent time. Any waiver must be in writing and signed by the Executive or an authorized officer of the Company, as the case may be.

15. SEVERABILITY.

If any provision or portion of this Agreement shall be determined to be invalid or unenforceable for any reason, in whole or in part, the remaining provisions of this Agreement shall be unaffected thereby and shall remain in full force and effect to the fullest extent permitted by law.

16. SURVIVORSHIP.

The respective rights and obligations of the Parties hereunder shall survive any termination of the Executive's employment to the extent necessary to the intended preservation of such rights and obligations.

17. BENEFICIARIES/REFERENCES.

The Executive shall be entitled, to the extent permitted under any applicable law, to select and change a beneficiary or beneficiaries to receive any compensation or benefit payable hereunder following the Executive's death by giving the Company written notice thereof. In the event of the Executive's death or a judicial determination of the Executive's incompetence, reference in this Agreement to the Executive shall be deemed, where appropriate, to refer to the Executive's beneficiary, estate or other legal representative.

18. GOVERNING LAW/JURISDICTION.

This Agreement shall be governed by and construed and interpreted in accordance with the laws of The Commonwealth of Massachusetts without reference to principles of conflict of laws.

19. RESOLUTION OF DISPUTES.

Any disputes arising under or in connection with this Agreement may, at the election of the Executive or the Company, be resolved by binding arbitration, to be held in Massachusetts in

accordance with the Rules and Procedures of the American Arbitration Association. If arbitration is elected, the Executive and the Company shall mutually select the arbitrator. If the Executive and the Company cannot agree on the selection of an arbitrator, each Party shall select an arbitrator and the two arbitrators shall select a third arbitrator, and the three arbitrators shall form an arbitration panel that shall resolve the dispute by majority vote. Judgment upon the award rendered by the arbitrator or arbitrators may be entered in any court having jurisdiction thereof. Costs of the arbitrator or arbitrators and other similar costs in connection with an arbitration shall be shared equally by the Parties; all other costs, such as attorneys' fees incurred by each Party, shall be borne by the Party incurring such costs.

20. NOTICES.

All notices that are required or permitted hereunder shall be in writing and sufficient if delivered personally, sent by facsimile (and promptly confirmed by personal delivery, registered or certified mail or overnight courier), sent by nationally-recognized overnight courier or sent by registered or certified mail, postage prepaid, addressed as follows:

If to the Company: Vertex Pharmaceuticals Incorporated
 130 Waverly Street
 Cambridge, MA 02139-4242
 Attn: Chief Executive Officer
 with copies to:
 the General Counsel

If to the Executive: at the Executive's home address listed in the Company records.

Any such notice shall be deemed to have been given: (a) when delivered if personally delivered or sent by facsimile on a business day; (b) on the business day after dispatch if sent by nationally-recognized overnight courier; and/or (c) on the fifth business day following the date of mailing if sent by mail.

21. HEADINGS.

The headings of the sections contained in this Agreement are for convenience only and shall not be deemed to control or affect the meaning or construction of any provision of this Agreement.

22. COUNTERPARTS.

This Agreement may be executed in two or more counterparts.

23. SECTION 409A COMPLIANCE.

It is the intention of the Company and the Executive that this Agreement and the payments provided for herein meet the requirements of Section 409A of the Code, to the extent applicable to this Agreement and such payments. The Company and the Executive agree to cooperate in good faith in preparing and executing, at such time as sufficient guidance is available under Section 409A and from time to time thereafter, such amendments to this Agreement, if any, as the Executive may reasonably request solely for the purpose of assuring that this Agreement and the payments provided hereunder meet the requirements of Section

409A. Nothing in this Section 23 shall require the Company to increase the Executive's compensation or make the Executive whole for any requested changes.

24. TAX WITHHOLDING; NO GUARANTEE OF ANY TAX CONSEQUENCES.

All payments hereunder shall be subject to all applicable withholding for any federal, state or local income taxes including any excise taxes under the Code. Notwithstanding any other provision of this Agreement to the contrary or other representation, the Company does not in any way guarantee the tax consequences of any payment or compensation under this Agreement including, without limitation, under Section 409A of the Code.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date first written above.

Vertex Pharmaceuticals Incorporated

/s/ Matthew W. Emmens

Matthew W. Emmens, President, Chairman and
Chief Executive Officer

Executive

/s/ David T. Howton

David T. Howton



VERTEX PHARMACEUTICALS INCORPORATED
130 WAVERLY STREET • CAMBRIDGE, MA 02139-4242
TEL. 617.444.6100 • FAX 617.444-6483
<http://www.vrtx.com>

January 26, 2012

David T. Howton
 35 Upton Street
 Boston, MA 02118

RE: Amended and Restated Change of Control Agreement

Dear Ty:

You are a key member of the senior management team of Vertex Pharmaceuticals Incorporated (the “Company”). As a result, the Company would like to provide you with the following “change of control” benefits to help ensure that if the Company becomes involved in a “change of control” transaction, there will be no distraction from your attention to the needs of the Company.

- I. Definitions . For the purposes of this Amended and Restated Change of Control Agreement (this “Agreement”), capitalized terms shall have the following meanings:
1. “Cause” shall mean:
 - (a) your conviction of a crime involving moral turpitude;
 - (b) your willful refusal or failure to follow a lawful directive or instruction of the Company’s Board of Directors or the individual(s) to whom you report, provided that you receive prior written notice of the directive(s) or instruction(s) that you failed to follow, and provided further that the Company, in good faith, gives you 30 days to correct such failure and further provided that if you correct the failure(s), any termination of your employment on account of such failure shall not be treated for purposes of this Agreement as a termination of employment for “Cause”;
 - (c) in carrying out your duties you commit (i) willful gross negligence, or (ii) willful gross misconduct, resulting in either case in material harm to the Company, unless such act, or failure to act, was believed by you, in good faith, to be in the best interests of the Company; or
 - (d) your violation of the Company’s policies made known to you regarding confidentiality, securities trading or inside information.
 2. “Change of Control” shall mean that:
 - (a) any “person” or “group” as such terms are used in Sections 13(d) and 14(d)(2) of the Securities Exchange Act of 1934 (the “Act”), becomes a beneficial owner, as such term is used in Rule 13d-3 promulgated under the Act, of securities of the Company
-

representing more than 50% of the combined voting power of the outstanding securities of the Company having the right to vote in the election of directors; or

- (b) all or substantially all the business or assets of the Company are sold or disposed of, or the Company or a subsidiary of the Company combines with another company pursuant to a merger, consolidation, or other similar transaction, other than (i) a transaction solely for the purpose of reincorporating the Company or one of its subsidiaries in a different jurisdiction or recapitalizing or reclassifying the Company's stock; or (ii) a merger or consolidation in which the shareholders of the Company immediately prior to such merger or consolidation continue to own at least a majority of the outstanding voting securities of the Company or the surviving entity immediately after the merger or consolidation.

3. "Code" shall mean the Internal Revenue Code of 1986, as amended.

4. "Disability" shall mean a disability as determined under the Company's long-term disability plan or program in effect at the time the disability first occurs, or if no such plan or program exists at the time of disability, then a "disability" as defined Section 22(e) (3) of the Code.

5. "Good Reason" shall mean one of the following events has occurred without your consent:

- (a) You suffer a material reduction in the authorities, duties or job title and responsibilities associated with your position as Senior Vice President and Chief Legal Officer for the Company as of the date hereof;
- (b) your annual base salary is decreased;
- (c) the office to which you are assigned is relocated to a place 35 or more miles away; or
- (d) following a Change of Control, the Company's successor fails to assume the Company's rights and obligations under this Agreement;

provided that Good Reason shall not exist unless and until within 30 days after the event giving rise to Good Reason under (a), (b), (c) or (d) above has occurred, you deliver a written termination notice to the Company stating that an event giving rise to Good Reason has occurred and identifying with reasonable detail the event that you assert constitutes Good Reason under (a), (b), (c) or (d) above and the Company fails or refuses to cure or eliminate the event giving rise to Good Reason on or within 30 days after receiving your notice. To avoid doubt, the termination of your employment would become effective at the close of business on the thirtieth day after the Company receives your termination notice, unless the Company cures or eliminates the event giving rise to Good Reason prior to such time.

6. "Termination Date" shall mean the last day of your employment with the Company.

II. *Severance Benefits upon Change of Control* . If:

- (A) your employment is terminated by the Company (except for termination for Cause or due to a Disability) and the Termination Date is within 90 days prior to a Change of Control or within 12 months after a Change of Control; or
- (B) you, of your own initiative, (i) terminate your employment for Good Reason (in accordance with the notice and cure provisions set forth in Section I.5 above) and (ii) the event giving rise to Good Reason occurs within 90 days prior to a Change of Control or within 12 months after a Change of Control;

then, you shall receive the following benefits:

- I. *Severance Payment* . In exchange for your execution within 60 days of the Termination Date of a general release, in a form satisfactory to the Company, of all claims against the Company, its subsidiaries, and its and their officers, directors and representatives, that becomes enforceable and irrevocable within such 60-day period, the Company shall make a cash payment (the “Severance Payment”) to you in an amount equal to:
 - (a) (i) your annual base salary (provided, however, that if you terminate your employment for Good Reason based on a reduction in your annual base salary, then the annual base salary to be used in calculating the Severance Payment shall be your annual base salary in effect immediately prior to such reduction in annual base salary) plus your target bonus under any bonus program applicable to you for the year in which the Termination Date occurs; plus
 - (b) a prorata portion of your target bonus for the portion of the year in which the Termination Date occurs under any bonus program applicable to you; plus
 - (c) all cash incentive compensation awards earned by you but not paid prior to the Termination Date; provided that, if a fiscal year has been completed and the incentive award for such fiscal year has not been determined, the incentive compensation for such completed fiscal year shall equal the target bonus for such fiscal year.

Except with respect to any portion of the Severance Payment that is delayed as set forth in this paragraph, the Severance Payment shall be made in cash within ten days after the execution by you of the general release referred to above and expiration without revocation of any applicable revocation periods under such general release (or, if the Change of Control resulting in your becoming entitled to such benefits occurs after such execution and expiration, within ten days after the Change of Control), provided that, if the 60-day period during which the general release is required to become effective and irrevocable begins in one calendar year and ends in another calendar year, the Severance Payment shall not be made before the first day of the second calendar year. The Severance Payment shall be divided into two portions, consisting of a portion that does not constitute “nonqualified deferred compensation” within the meaning of Section 409A

of the Code and a portion, if any, that does constitute nonqualified deferred compensation. If you are a “specified employee” as defined in Section 409A(a)(2)(B)(i) of the Code, the commencement of the delivery of any such payments that constitute nonqualified deferred compensation payable upon a “separation from service” under Section 409A(a)(2)(A)(i) of the Code will be delayed until the first business day that is more than six months after your Termination Date. The determination of whether, and the extent to which, any of the payments to be made to you hereunder are nonqualified deferred compensation shall be made after the application of all applicable exclusions, including those set forth under Treasury Reg. § 1.409A-1(b)(9). Any payments that are intended to qualify for the exclusion for separation pay due to involuntary separation from service set forth in Reg. § 1.409A-1(b)(9)(iii) must be paid no later than the last day of the second taxable year following the taxable year in which the Termination Date occurs. To the extent that the termination of your employment does not constitute a separation of service under Section 409A(a)(2)(A)(i) of the Code (as the result of further services that are reasonably anticipated to be provided by you to the Company at the time your employment is terminated), the payment of any non-qualified deferred compensation will be further delayed until the first business day that is more than six months after the date of a subsequent event constituting a separation of service under Section 409A(a)(2)(A)(i) of the Code.

2. *Accelerated Vesting.*

- (a) On the Termination Date, stock options for the purchase of the Company’s securities held by you as of the Termination Date and not then exercisable shall immediately become exercisable in full. The options to which this accelerated vesting applies shall remain exercisable until the earlier of (a) the end of the 90-day period immediately following the later of (i) the Termination Date or (ii) the date of the Change of Control and (b) the date the stock option(s) would otherwise expire; and
- (b) On the Termination Date, the Company’s lapsing repurchase right with respect to shares of restricted stock held by you shall lapse in full (subject to your making satisfactory arrangements with the Company providing for the payment to the Company of all required withholding taxes).

Notwithstanding anything to the contrary in this Agreement, the terms of any option agreement or restricted stock agreement shall govern the acceleration, if any, of vesting or lapsing of the Company’s repurchase rights and period of exercisability of such awards, as applicable, except to the extent that the terms of this Agreement are more favorable to you.

3. *Continued Insurance Coverage* . If COBRA coverage is elected by you, the Company shall pay the cost of insurance continuation premiums on your behalf (whether or not covered by COBRA) to continue standard medical, dental and life insurance coverage for you (or the cash equivalent of same if you are ineligible for continued coverage) until the earlier of (i) the date 12 months after the Termination Date or (ii) the date you begin receiving substantially equivalent coverage and benefits through a subsequent employer.

4. *No Mitigation.* You shall not be required to mitigate the amount of the Severance Payment or any other benefit provided under this Agreement by seeking other employment or otherwise, nor shall the amount of any payment or benefit provided for in this Agreement be reduced (except as provided in Article II Section 3(ii)) by any compensation earned by you as the result of other employment, by retirement benefits, or be offset against any amount claimed to be owed by you to the Company or otherwise (except for any required withholding taxes); provided, that if the Company makes any other severance payments to you under any other program or agreement, such amounts shall be offset against the payments the Company is obligated to make pursuant to this Agreement.

III. *Miscellaneous .*

1. *Employee's Obligations .* Upon the termination of employment, you shall promptly deliver to the Company all property of the Company and all material documents, statistics, account records, programs and other similar tangible items which may be in your possession or under your control and which relate in a material way to the business or affairs of the Company or its subsidiaries, and no copies of any such documents or any part thereof shall be retained by you.
2. *Entire Agreement .* This Agreement and the “*Employee Non-Disclosure, Non-Competition & Inventions Agreement*” previously executed by you covers the entire understanding of the parties as to the subject matter hereof, superseding all prior understandings and agreements related hereto, including the previous Change of Control Agreement between you and the Company. No modification or amendment of the terms and conditions of this Agreement shall be effective unless in writing and signed by the parties or their respective duly authorized agents, provided, however, that the Company may, without your consent, unilaterally adopt amendments that may be required so that this Agreement continues to comply with applicable law or regulation, including without limitation Section 409A of the Code, provided such amendments do not adversely affect the benefits to be provided to you under Section II of this Agreement.
3. *Governing Law .* This Agreement shall be governed by the laws of The Commonwealth of Massachusetts, as applied to contracts entered into and performed entirely in Massachusetts by Massachusetts residents.
4. *Successors and Assigns .* This Agreement may be assigned by the Company upon a sale, transfer or reorganization of the Company. Upon a Change of Control, the Company shall require the successor to assume the Company's rights and obligations under this Agreement. The Company's failure to do so shall constitute a material breach of this Agreement. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their successors, permitted assigns, legal representatives and heirs.

Kindly indicate your acceptance of the foregoing by signing and dating this Agreement as noted below, and returning one fully executed original to my attention.

Very truly yours,

Vertex Pharmaceuticals Incorporated

By: /s/ Matthew Emmens

Matthew Emmens
Chief Executive Officer

ACCEPTED AND AGREED:

/s/ David T. Howton

David T. Howton

EMPLOYMENT AGREEMENT

This Employment Agreement (this “Agreement”) is made and entered into as of this 31st day of January, 2012, by and between Vertex Pharmaceuticals Incorporated, a Massachusetts corporation (together with its successors and assigns, the “Company”), and Christiana Stamoulis (the “Executive”).

WITNESSETH

WHEREAS, the Company is employing the Executive as the Company’s Senior Vice President, Corporate Strategy and Business Development; and

WHEREAS, the Executive has been designated as a member of the Executive Team of the Company;

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein and for other good and valuable consideration, the receipt of which mutually is acknowledged, the Company and the Executive (each individually a “Party”, and together the “Parties”) agree as follows:

1. DEFINITIONS.

“Base Salary” shall mean the Executive’s base salary in accordance with Section 4 below.

“Board” shall mean the Board of Directors of the Company.

“Cause” shall mean (i) the Executive is convicted of a crime involving moral turpitude, (ii) the Executive commits a material breach of any provision of this Agreement not involving the performance or nonperformance of duties, or (iii) the Executive, in carrying out the Executive’s duties, acts or fails to act in a manner that is determined, in the sole discretion of the Board, after written notice of any such act or failure to act and a reasonable opportunity to cure the deficiency has been provided to the Executive, to be (A) willful gross neglect or (B) willful gross misconduct resulting, in either case, in material harm to the Company unless such act, or failure to act, was believed by the Executive, in good faith, to be in the best interests of the Company.

“Change of Control” shall have the meaning set forth in the Change of Control Agreement.

“Change of Control Agreement” shall mean the Second Amended and Restated Change of Control letter agreement between the Company and the Executive of even date herewith.

“Code” shall mean the Internal Revenue Code of 1986, as amended.

“Common Stock” shall mean the common stock of the Company.

“Disability” or “Disabled” shall mean a disability as determined under the Company’s long-term disability plan or program in effect at the time the disability first occurs, or if no such

plan or program exists at the time of disability, then a “disability” as defined under Section 22(e)(3) of the Code.

“Effective Date” shall mean January 31, 2012.

“Good Reason” shall mean that, without the Executive’s consent, one or more of the following events occurs:

- (i) the Executive’s Base Salary is decreased unless such reduction is part of an across-the-board proportionate reduction in the salaries of the Company’s senior management team; or
- (ii) the office to which the Executive is assigned is relocated to a place 35 or more miles away and such relocation is not at the Executive’s request or with the Executive’s prior agreement (and other than, for Executives assigned to the Company’s principal executive offices, in connection with a change in location of the Company’s principal executive offices);

provided that Good Reason shall not exist unless and until within 30 days after the event giving rise to Good Reason under either (i) or (ii) above has occurred, the Executive delivers a written termination notice to the Company stating that an event giving rise to Good Reason has occurred and identifying with reasonable detail the event that the Executive asserts constitutes Good Reason under either (i) or (ii) above and the Company fails or refuses to cure or eliminate the event giving rise to Good Reason on or within 30 days after receiving such notice. To avoid doubt, the termination of the Executive’s employment would become effective at the close of business on the thirtieth day after the Company receives the Executive’s termination notice, unless the Company cures or eliminates the event giving rise to Good Reason prior to such time.

“Severance Payment” shall mean an amount equal to the sum of the Base Salary in effect on the date of termination of Executive’s employment, plus the amount of the Target Bonus for the Executive for the year in which the Executive’s employment is terminated; provided, however, that if the Executive terminates the Executive’s employment for Good Reason based on a reduction in Base Salary, then the Base Salary to be used in calculating the Severance Payment shall be the Base Salary in effect immediately prior to such reduction in Base Salary.

“Target Bonus” shall mean the target cash bonus for which the Executive is eligible on an annual basis, at a level consistent with the Executive’s title and responsibilities, under the Company’s bonus program then in effect and applicable to the Company’s senior executives generally.

2. TERM OF EMPLOYMENT.

The Company hereby employs the Executive, and the Executive hereby accepts such employment, continuing until termination in accordance with the terms of this Agreement. The period during which the Executive is employed hereunder is referred to in this Agreement as the “term of employment.”

3. POSITION.

On the Effective Date, the Executive is employed as the Company’s Senior Vice President, Corporate Strategy and Business Development.

4. BASE SALARY.

The Executive's annualized Base Salary as of the date of this Agreement is \$363,654.38, payable in accordance with the regular payroll practices of the Company. The Base Salary shall be reviewed no less frequently than annually, and any changes thereto (which shall thereafter be deemed the Executive's Base Salary) shall be solely within the discretion of the Board.

5. TARGET BONUS PROGRAM.

During the term of employment, the Executive shall be eligible to participate in the Company's Target Bonus program (and other cash incentive compensation programs) applicable to the Company's senior executives, as any such programs are established and modified from time to time by the Board in its sole discretion, and in accordance with the terms of such program.

6. INCENTIVE COMPENSATION PROGRAMS.

During the term of employment, the Executive shall be eligible to participate in the Company's incentive compensation programs applicable to the Company's senior executives, as such programs may be established and modified from time to time by the Board in its sole discretion.

7. EMPLOYEE BENEFIT PROGRAMS.

During the term of employment, the Executive shall be entitled to participate in all employee welfare and pension benefit plans, programs and/or arrangements offered by the Company to its senior executives, as such plans, programs and arrangements may be amended from time to time, to the same extent and on the same terms applicable to other senior executives. Nothing in this section shall preclude the Company from amending or terminating any of its employee benefit plans, programs or arrangements.

8. VACATION.

During the term of employment, the Executive shall be entitled to paid vacation days each calendar year in accordance with the Company's vacation policy then in effect.

9. TERMINATION OF EMPLOYMENT.

(a) **Termination in Connection with a Change of Control** . To the extent the Executive is entitled, in connection with the Executive's termination of employment, to severance or other benefits under the Change of Control Agreement, the Executive shall not be entitled to corresponding benefits under this Section 9.

(b) **Termination by the Company for Cause; or Termination by the Executive without Good Reason**. If the Company terminates the Executive's employment for Cause, or if the Executive voluntarily terminates the Executive's employment, other than for Good Reason, death or Disability, the term of employment shall end as of the date specified below, and the Executive shall be entitled to the following:

- (i) Base Salary earned by Executive but not paid through the date of termination of Executive's employment under this Section 9 (b); and

- (ii) any amounts earned, accrued or owing to the Executive but not yet paid under Sections 5, 6, or 7 above.

Termination by Company for Cause shall be effective as of the date noticed by the Company. Voluntary termination by Executive other than for Good Reason, death or Disability shall be effective upon 90 days' prior written notice to the Company and shall not be deemed a breach of this Agreement.

(c) Termination by the Company Without Cause; or Termination by the Executive for Good Reason. If the Executive's employment is terminated by the Company without Cause (other than due to death or Disability), or is terminated by the Executive for Good Reason (in accordance with the notice and cure provisions set forth in the definition of "Good Reason" above), the Executive shall be entitled to the following (provided that, with respect to (iii) and (v) such amounts shall be subject to and in exchange for a general release of all claims against the Company, its subsidiaries, and their officers, directors, agents and representatives, which is executed by Executive and becomes enforceable and non-revocable within 60 days of the date of termination):

- (i) Base Salary earned by Executive but not paid through the date of termination of Executive's employment under this Section 9 (c);
- (ii) all incentive compensation awards earned by Executive but not paid prior to the date of termination of Executive's employment under this Section 9(c);
- (iii) a cash payment to the Executive in an amount equal to the Severance Payment, payable within ten days after the execution of a general release and expiration, without revocation, of any applicable revocation periods under the general release provided that if the 60-day period during which the release is required to become effective and irrevocable begins in one calendar year and ends in another calendar year, the Severance Payment shall not be made before the first day of the second calendar year;
- (iv) any amounts earned, accrued or owing to the Executive but not yet paid under Sections 5, 6 or 7 above;
- (v) if COBRA coverage is elected by the Executive, the Company shall pay the cost of insurance continuation premiums on the Executive's behalf (whether or not covered by COBRA) to continue standard medical, dental and life insurance coverage for the Executive (or the cash equivalent of same in the event the Executive is ineligible for continued coverage) until the earlier of:
 - (A) the date 12 months after the date the Executive's employment is terminated; or
 - (B) the date, or dates, on which the Executive receives equivalent coverage and benefits under the plans, programs and/or arrangements of a subsequent employer (such coverage and benefits to be determined on a coverage-by-coverage or benefit-by-benefit basis).

If Executive is a "specified employee" under Section 409A(a)(2)(B)(i) of the Code, any payment of "nonqualified deferred compensation" (as defined under Section 409A of the Code

and related guidance) attributable to a “separation from service” (as defined under Section 409A of the Code and related guidance) shall not commence until the first full business day that is more than six months after the applicable separation from service (“Deferred Payment Date”). Any payments that would otherwise have been made between the separation from service and the Deferred Payment Date, but for this paragraph, shall be made in a lump sum on the Deferred Payment Date. Payments that, in any case, are scheduled to be made after the Deferred Payment Date shall continue according to the applicable payment schedule. To the extent that the termination of the Executive’s employment does not constitute a separation of service under Section 409A(a)(2)(A)(i) of the Code (as the result of further services that reasonably are anticipated to be provided by the Executive to the Company at the time the Executive’s employment is terminated), the payment of any nonqualified deferred compensation will be further delayed until the date that is the first full business day that is more than six months after the date of a subsequent event constituting a separation of service under Section 409A(a)(2)(A)(i) of the Code.

10. ASSIGNABILITY; BINDING NATURE.

This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors, heirs (in the case of the Executive) and assigns. No rights or obligations of the Company under this Agreement may be assigned or transferred by the Company except that such rights or obligations may be assigned or transferred pursuant to a merger or consolidation in which the Company is not the continuing entity, or the sale or liquidation of all or substantially all of the assets of the Company; provided, however, that the assignee or transferee is the successor to all or substantially all of the assets of the Company and such assignee or transferee assumes the liabilities, obligations and duties of the Company, as contained in this Agreement, either contractually or as a matter of law.

11. REPRESENTATIONS.

The Company represents and warrants that it is fully authorized and empowered to enter into this Agreement, and that the performance of its obligations under this Agreement will not violate any agreement between it and any other person, firm or organization. The Executive represents and warrants that no agreement exists between her and any other person, firm or organization that would be violated by the performance of the Executive’s obligations under this Agreement.

12. INDEMNIFICATION; INSURANCE.

The Executive shall at all times be indemnified and eligible for advancement of expenses on the same basis as is provided for the Company’s other executive officers and in accordance with the provisions of the Company’s charter and by-laws then in effect. The Executive shall also be covered under all of the Company’s policies of liability insurance maintained for the benefit of its directors and officers on the same basis as is provided for its other executive officers.

13. ENTIRE AGREEMENT; TERMINATION.

This Agreement, the agreements referenced herein and the Employee Non-Disclosure, Non-Competition & Inventions Agreement between the Executive and the Company contain the entire understanding and agreement between the Parties concerning the subject matter hereof and

supersedes all prior agreements, understandings, discussions, negotiations and undertakings, whether written or oral, between the Parties with respect thereto. Subject to the terms of this Agreement, the Company shall be entitled to terminate the Executive's employment at any time, and the Executive may terminate the Executive's employment by the Company, at any time subject to the provisions of Section 9(b) of this Agreement, in each case by written notice provided in accordance with Section 20 of this Agreement.

14. AMENDMENT OR WAIVER.

No provision in this Agreement may be amended unless such amendment is agreed to in writing and signed by the Executive and an authorized officer of the Company provided that the Company may, without the Executive's consent, unilaterally adopt amendments that may be required so that this Agreement continues to comply with applicable law or regulations, including without limitation Section 409A of the Code, provided such amendments do not adversely affect the benefits to the Executive under this Agreement. No waiver by either Party of any breach by the other Party of any condition or provision contained in this Agreement to be performed by such other Party shall be deemed a waiver of a similar or dissimilar condition or provision at the same or any prior or subsequent time. Any waiver must be in writing and signed by the Executive or an authorized officer of the Company, as the case may be.

15. SEVERABILITY.

If any provision or portion of this Agreement shall be determined to be invalid or unenforceable for any reason, in whole or in part, the remaining provisions of this Agreement shall be unaffected thereby and shall remain in full force and effect to the fullest extent permitted by law.

16. SURVIVORSHIP.

The respective rights and obligations of the Parties hereunder shall survive any termination of the Executive's employment to the extent necessary to the intended preservation of such rights and obligations.

17. BENEFICIARIES/REFERENCES.

The Executive shall be entitled, to the extent permitted under any applicable law, to select and change a beneficiary or beneficiaries to receive any compensation or benefit payable hereunder following the Executive's death by giving the Company written notice thereof. In the event of the Executive's death or a judicial determination of the Executive's incompetence, reference in this Agreement to the Executive shall be deemed, where appropriate, to refer to the Executive's beneficiary, estate or other legal representative.

18. GOVERNING LAW/JURISDICTION.

This Agreement shall be governed by and construed and interpreted in accordance with the laws of The Commonwealth of Massachusetts without reference to principles of conflict of laws.

19. RESOLUTION OF DISPUTES.

Any disputes arising under or in connection with this Agreement may, at the election of the Executive or the Company, be resolved by binding arbitration, to be held in Massachusetts in

accordance with the Rules and Procedures of the American Arbitration Association. If arbitration is elected, the Executive and the Company shall mutually select the arbitrator. If the Executive and the Company cannot agree on the selection of an arbitrator, each Party shall select an arbitrator and the two arbitrators shall select a third arbitrator, and the three arbitrators shall form an arbitration panel that shall resolve the dispute by majority vote. Judgment upon the award rendered by the arbitrator or arbitrators may be entered in any court having jurisdiction thereof. Costs of the arbitrator or arbitrators and other similar costs in connection with an arbitration shall be shared equally by the Parties; all other costs, such as attorneys' fees incurred by each Party, shall be borne by the Party incurring such costs.

20. NOTICES.

All notices that are required or permitted hereunder shall be in writing and sufficient if delivered personally, sent by facsimile (and promptly confirmed by personal delivery, registered or certified mail or overnight courier), sent by nationally-recognized overnight courier or sent by registered or certified mail, postage prepaid, addressed as follows:

If to the Company: Vertex Pharmaceuticals Incorporated
 130 Waverly Street
 Cambridge, MA 02139-4242
 Attn: Chief Executive Officer
 with copies to:
 the General Counsel

If to the Executive: at the Executive's home address listed in the Company records.

Any such notice shall be deemed to have been given: (a) when delivered if personally delivered or sent by facsimile on a business day; (b) on the business day after dispatch if sent by nationally-recognized overnight courier; and/or (c) on the fifth business day following the date of mailing if sent by mail.

21. HEADINGS.

The headings of the sections contained in this Agreement are for convenience only and shall not be deemed to control or affect the meaning or construction of any provision of this Agreement.

22. COUNTERPARTS.

This Agreement may be executed in two or more counterparts.

23. SECTION 409A COMPLIANCE.

It is the intention of the Company and the Executive that this Agreement and the payments provided for herein meet the requirements of Section 409A of the Code, to the extent applicable to this Agreement and such payments. The Company and the Executive agree to cooperate in good faith in preparing and executing, at such time as sufficient guidance is available under Section 409A and from time to time thereafter, such amendments to this Agreement, if any, as the Executive may reasonably request solely for the purpose of assuring that this Agreement and the payments provided hereunder meet the requirements of Section

409A. Nothing in this Section 23 shall require the Company to increase the Executive's compensation or make the Executive whole for any requested changes.

24. TAX WITHHOLDING; NO GUARANTEE OF ANY TAX CONSEQUENCES.

All payments hereunder shall be subject to all applicable withholding for any federal, state or local income taxes including any excise taxes under the Code. Notwithstanding any other provision of this Agreement to the contrary or other representation, the Company does not in any way guarantee the tax consequences of any payment or compensation under this Agreement including, without limitation, under Section 409A of the Code.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date first written above.

Vertex Pharmaceuticals Incorporated

/s/ Matthew W. Emmens

Matthew W. Emmens, President, Chairman and
Chief Executive Officer

Executive

/s/ Christiana Stamoulis

Christiana Stamoulis



VERTEX PHARMACEUTICALS INCORPORATED
130 WAVERLY STREET • CAMBRIDGE, MA 02139-4242
TEL. 617.444.6100 • FAX 617.444.6483
<http://www.vrtx.com>

January 31, 2012

Christiana Stamoulis
175 Blossom Street
Apartment 1304
Boston, MA 02114

RE: Second Amended and Restated Change of Control Agreement

Dear Christiana:

You are a key member of the senior management team of Vertex Pharmaceuticals Incorporated (the “Company”). As a result, the Company would like to provide you with the following “change of control” benefits to help ensure that if the Company becomes involved in a “change of control” transaction, there will be no distraction from your attention to the needs of the Company.

- I. *Definitions* . For the purposes of this Amended and Restated Change of Control Agreement (this “Agreement”), capitalized terms shall have the following meanings:
1. “Cause” shall mean:
 - (a) your conviction of a crime involving moral turpitude;
 - (b) your willful refusal or failure to follow a lawful directive or instruction of the Company’s Board of Directors or the individual(s) to whom you report, provided that you receive prior written notice of the directive(s) or instruction(s) that you failed to follow, and provided further that the Company, in good faith, gives you 30 days to correct such failure and further provided that if you correct the failure(s), any termination of your employment on account of such failure shall not be treated for purposes of this Agreement as a termination of employment for “Cause”;
 - (c) in carrying out your duties you commit (i) willful gross negligence, or (ii) willful gross misconduct, resulting in either case in material harm to the Company, unless such act, or failure to act, was believed by you, in good faith, to be in the best interests of the Company; or
 - (d) your violation of the Company’s policies made known to you regarding confidentiality, securities trading or inside information.
-

2. “Change of Control” shall mean that:
- (a) any “person” or “group” as such terms are used in Sections 13(d) and 14(d)(2) of the Securities Exchange Act of 1934 (the “ Act ”), becomes a beneficial owner, as such term is used in Rule 13d-3 promulgated under the Act, of securities of the Company representing more than 50% of the combined voting power of the outstanding securities of the Company having the right to vote in the election of directors; or
 - (b) all or substantially all the business or assets of the Company are sold or disposed of, or the Company or a subsidiary of the Company combines with another company pursuant to a merger, consolidation, or other similar transaction, other than (i) a transaction solely for the purpose of reincorporating the Company or one of its subsidiaries in a different jurisdiction or recapitalizing or reclassifying the Company’s stock; or (ii) a merger or consolidation in which the shareholders of the Company immediately prior to such merger or consolidation continue to own at least a majority of the outstanding voting securities of the Company or the surviving entity immediately after the merger or consolidation.
3. “Code” shall mean the Internal Revenue Code of 1986, as amended.
4. “Disability” shall mean a disability as determined under the Company’s long-term disability plan or program in effect at the time the disability first occurs, or if no such plan or program exists at the time of disability, then a “disability” as defined Section 22(e) (3) of the Code.
5. “Good Reason” shall mean one of the following events has occurred without your consent:
- (a) You suffer a material reduction in the authorities, duties or job title and responsibilities associated with your position as Senior Vice President, Corporate Strategy and Business Development for the Company as of the date hereof;
 - (b) your annual base salary is decreased;
 - (c) the office to which you are assigned is relocated to a place 35 or more miles away; or
 - (d) following a Change of Control, the Company’s successor fails to assume the Company’s rights and obligations under this Agreement;

provided that Good Reason shall not exist unless and until within 30 days after the event giving rise to Good Reason under (a), (b), (c) or (d) above has occurred, you deliver a written termination notice to the Company stating that an event giving rise to Good Reason has occurred and identifying with reasonable detail the event that you assert constitutes Good Reason under (a), (b), (c) or (d) above and the Company fails or refuses to cure or eliminate the event giving rise to Good Reason on or within 30 days after receiving your notice. To avoid doubt, the termination of your employment would become effective at the close of business on the thirtieth day after the Company receives your termination notice, unless the Company cures or eliminates the event giving rise to Good Reason prior to such time.

6. “ Termination Date ” shall mean the last day of your employment with the Company.

II. *Severance Benefits upon Change of Control* . If:

- (A) your employment is terminated by the Company (except for termination for Cause or due to a Disability) and the Termination Date is within 90 days prior to a Change of Control or within 12 months after a Change of Control; or
- (B) you, of your own initiative, (i) terminate your employment for Good Reason (in accordance with the notice and cure provisions set forth in Section I.5 above) and (ii) the event giving rise to Good Reason occurs within 90 days prior to a Change of Control or within 12 months after a Change of Control;

then, you shall receive the following benefits:

- 1. *Severance Payment* . In exchange for your execution within 60 days of the Termination Date of a general release, in a form satisfactory to the Company, of all claims against the Company, its subsidiaries, and its and their officers, directors and representatives, that becomes enforceable and irrevocable within such 60-day period, the Company shall make a cash payment (the “ Severance Payment ”) to you in an amount equal to:
 - (a) (i) your annual base salary (provided, however, that if you terminate your employment for Good Reason based on a reduction in your annual base salary, then the annual base salary to be used in calculating the Severance Payment shall be your annual base salary in effect immediately prior to such reduction in annual base salary) plus your target bonus under any bonus program applicable to you for the year in which the Termination Date occurs; plus
 - (b) A prorata portion of your target bonus for the portion of the year in which the Termination Date occurs under any bonus program applicable to you; plus
 - (c) all cash incentive compensation awards earned by you but not paid prior to the Termination Date; provided that, if a fiscal year has been completed and the incentive award for such fiscal year has not been determined, the incentive compensation for such completed fiscal year shall equal the target bonus for such fiscal year.

Except with respect to any portion of the Severance Payment that is delayed as set forth in this paragraph, the Severance Payment shall be made in cash within ten days after the execution by you of the general release referred to above and expiration without revocation of any applicable revocation periods under such general release (or, if the Change of Control resulting in your becoming entitled to such benefits occurs after such execution and expiration, within ten days after the Change of Control), provided that, if the 60-day period during which the general release is required to become effective and

irrevocable begins in one calendar year and ends in another calendar year, the Severance Payment shall not be made before the first day of the second calendar year. The Severance Payment shall be divided into two portions, consisting of a portion that does not constitute “nonqualified deferred compensation” within the meaning of Section 409A of the Code and a portion, if any, that does constitute nonqualified deferred compensation. If you are a “specified employee” as defined in Section 409A(a)(2)(B)(i) of the Code, the commencement of the delivery of any such payments that constitute nonqualified deferred compensation payable upon a “separation from service” under Section 409A(a)(2)(A)(i) of the Code will be delayed until the first business day that is more than six months after your Termination Date. The determination of whether, and the extent to which, any of the payments to be made to you hereunder are nonqualified deferred compensation shall be made after the application of all applicable exclusions, including those set forth under Treasury Reg. § 1.409A-1(b)(9). Any payments that are intended to qualify for the exclusion for separation pay due to involuntary separation from service set forth in Reg. § 1.409A-1(b)(9)(iii) must be paid no later than the last day of the second taxable year following the taxable year in which the Termination Date occurs. To the extent that the termination of your employment does not constitute a separation of service under Section 409A(a)(2)(A)(i) of the Code (as the result of further services that are reasonably anticipated to be provided by you to the Company at the time your employment is terminated), the payment of any non-qualified deferred compensation will be further delayed until the first business day that is more than six months after the date of a subsequent event constituting a separation of service under Section 409A(a)(2)(A)(i) of the Code.

2. *Accelerated Vesting.*

- (a) On the Termination Date, stock options for the purchase of the Company’s securities held by you as of the Termination Date and not then exercisable shall immediately become exercisable in full. The options to which this accelerated vesting applies shall remain exercisable until the earlier of (a) the end of the 90-day period immediately following the later of (i) the Termination Date or (ii) the date of the Change of Control and (b) the date the stock option(s) would otherwise expire; and
- (b) On the Termination Date, the Company’s lapsing repurchase right with respect to shares of restricted stock held by you shall lapse in full (subject to your making satisfactory arrangements with the Company providing for the payment to the Company of all required withholding taxes).

Notwithstanding anything to the contrary in this Agreement, the terms of any option agreement or restricted stock agreement shall govern the acceleration, if any, of vesting or lapsing of the Company’s repurchase rights and period of exercisability of such awards, as applicable, except to the extent that the terms of this Agreement are more favorable to you.

3. *Continued Insurance Coverage* . If COBRA coverage is elected by you, the Company shall pay the cost of insurance continuation premiums on your behalf (whether or not

covered by COBRA) to continue standard medical, dental and life insurance coverage for you (or the cash equivalent of same if you are ineligible for continued coverage) until the earlier of (i) the date 12 months after the Termination Date or (ii) the date you begin receiving substantially equivalent coverage and benefits through a subsequent employer.

4. *No Mitigation.* You shall not be required to mitigate the amount of the Severance Payment or any other benefit provided under this Agreement by seeking other employment or otherwise, nor shall the amount of any payment or benefit provided for in this Agreement be reduced (except as provided in Article II Section 3(ii)) by any compensation earned by you as the result of other employment, by retirement benefits, or be offset against any amount claimed to be owed by you to the Company or otherwise (except for any required withholding taxes); provided, that if the Company makes any other severance payments to you under any other program or agreement, such amounts shall be offset against the payments the Company is obligated to make pursuant to this Agreement.

III. *Miscellaneous .*

1. *Employee's Obligations .* Upon the termination of employment, you shall promptly deliver to the Company all property of the Company and all material documents, statistics, account records, programs and other similar tangible items which may be in your possession or under your control and which relate in a material way to the business or affairs of the Company or its subsidiaries, and no copies of any such documents or any part thereof shall be retained by you.
2. *Entire Agreement .* This Agreement and the “*Employee Non-Disclosure, Non-Competition & Inventions Agreement*” previously executed by you covers the entire understanding of the parties as to the subject matter hereof, superseding all prior understandings and agreements related hereto, including the previous Change of Control Agreement between you and the Company. No modification or amendment of the terms and conditions of this Agreement shall be effective unless in writing and signed by the parties or their respective duly authorized agents, provided, however, that the Company may, without your consent, unilaterally adopt amendments that may be required so that this Agreement continues to comply with applicable law or regulation, including without limitation Section 409A of the Code, provided such amendments do not adversely affect the benefits to be provided to you under Section II of this Agreement.
3. *Governing Law .* This Agreement shall be governed by the laws of The Commonwealth of Massachusetts, as applied to contracts entered into and performed entirely in Massachusetts by Massachusetts residents.
4. *Successors and Assigns .* This Agreement may be assigned by the Company upon a sale, transfer or reorganization of the Company. Upon a Change of Control, the Company shall require the successor to assume the Company's rights and obligations under this Agreement. The Company's failure to do so shall constitute a material breach of this Agreement. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their successors, permitted assigns, legal representatives and heirs.

Kindly indicate your acceptance of the foregoing by signing and dating this Agreement as noted below, and returning one fully executed original to my attention.

Very truly yours,

Vertex Pharmaceuticals Incorporated

By: /s/ Matthew W. Emmens

Matthew W. Emmens
President, Chairman and
Chief Executive Officer

ACCEPTED AND AGREED:

/s/ Christiana Stamoulis

Christiana Stamoulis

1/31/2012

Date

Vertex Employee Compensation Plan

On an annual basis in the first quarter of the fiscal year the Management Development and Compensation Committee of our Board of Directors adopts an employee compensation plan for our officers and other employees, including our named executive officers, together with performance goals for that fiscal year. The plan addresses three components of employee compensation—base salary, performance bonuses which serve as short-term incentives and equity grants which serve as long-term incentives—that are designed to motivate, reward and retain employees by aligning compensation with the achievement of strategic corporate goals.

Upon completion of each performance period (usually a calendar year), our Board of Directors assigns a performance rating on the basis of achievement of goals for the company set by the Board, in consultation with our chief executive officer, early in the performance period. The amount available for payment of performance bonuses is established on the basis of this performance rating, and is allocated to employees on the basis of salary tier and individual performance rating. The base salaries of the executive officers are set based on market and other competitive factors. Merit increases to base salaries for other employees are made on the basis of individual performance rating. Annual equity grants, made in the form of stock options, restricted stock grants or units, or a combination of both are made on the basis of salary tier and individual performance.

The Board of Directors retains broad discretion to determine the appropriate form and level of compensation, particularly for our executives, on the basis of its assessment of our executives, the demand for talent, our performance and other factors. Key corporate performance factors generally include, among other things, achievement of regulatory and commercialization goals, research and development productivity, enhancements of organizational capabilities, maintenance of financial stability and other aspects of our performance. We reserve the right to modify the plan, and the key corporate performance factors and criteria under the plan, at any time.

On February 2, 2012, the Board of Directors determined the cash bonus awards related to the fiscal year ended December 31, 2011 and annual salaries effective February 2012. Jeffrey M. Leiden, who joined us as our chief executive officer designee in December 2011, was not eligible for a cash bonus award for 2011. The cash bonus awards for 2011 and annual salaries for 2012 for the following executive officers were:

Name	2011 Cash Bonus	2012 Salary
Matthew W. Emmens	\$ 3,019,587	\$ 1,202,000
Jeffrey M. Leiden	not eligible	\$ 1,000,000
Peter Mueller	\$ 525,146	\$ 601,000
Ian F. Smith	\$ 425,493	\$ 541,059
Nancy J. Wysenski	\$ 454,230	\$ 519,841

Vertex Pharmaceuticals Non-Employee Board Compensation

<u>Annual Retainer :</u>	\$50,000
<u>Committee Chair Compensation</u>	
Audit & Finance Committee Chair	\$25,000 annual retainer
Corporate Governance & Nominating Committee Chair	\$20,000 annual retainer
Management Development & Compensation Committee Chair	\$20,000 annual retainer
Science & Technology Committee Chair	\$12,500 annual retainer
<u>Committee Membership Fees (Non-Chairs) :</u>	\$5,000 annually per committee membership
<u>Lead Independent Director Compensation :</u>	\$25,000 annual retainer
<u>Equity Grants</u>	<p>Upon first election to the Board, 30,000 options, vesting quarterly over four years; and</p> <p>On June 1 of each year in service, 20,000 fully vested options.</p> <p>On June 1 of each year, 2,500 fully vested options for the Chairman of the Board, if independent, or the Lead Independent Director.</p>

Vertex Pharmaceuticals (San Diego) LLC, a Delaware limited liability company

Vertex Pharmaceuticals (North America) LLC, a Delaware limited liability company (1)

Vertex Securities Corporation, a Massachusetts corporation

Vertex Pharmaceuticals (Cayman) Limited, a Cayman Islands company

Vertex Holdings, Inc., a Delaware corporation

Vertex Pharmaceuticals (Europe) Limited, a United Kingdom company (2)

Vertex Global Pharmaceuticals Holdings (Canada) Limited, a British Columbia company

Vertex Pharmaceuticals (Canada) Incorporated, a Canadian company (3)

Vertex Pharmaceuticals (Switzerland) Sàrl, a Swiss company

Vertex Pharmaceuticals (Ireland) Limited, an Irish company (4)

Vertex Pharmaceuticals (U.K.) Limited, a United Kingdom company

Vertex Pharmaceuticals (France) SAS, a French company

Vertex Pharmaceuticals (Germany) GmbH, a German company

(1) a subsidiary of Vertex Pharmaceuticals (San Diego) LLC

(2) a subsidiary of Vertex Holdings, Inc.

(3) a subsidiary of Vertex Global Pharmaceuticals Holdings (Canada) Limited

(4) a subsidiary of Vertex Pharmaceuticals (Switzerland) Sàrl

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Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statements (Form S-8 Nos. 333-65666, 333-134482, 333-150945, 333-150946, 333-160442, and 333-166803, and Form S-3 No. 333-165002) of Vertex Pharmaceuticals Incorporated of our reports dated February 22, 2012, with respect to the consolidated financial statements of Vertex Pharmaceuticals Incorporated and the effectiveness of internal control over financial reporting of Vertex Pharmaceuticals Incorporated, included in this Annual Report (Form 10-K) for the year ended December 31, 2011.

/s/ Ernst & Young LLP

Boston, Massachusetts
February 22, 2012

QuickLinks

[Exhibit 23.1](#)

CERTIFICATION

I, Jeffrey M. Leiden, certify that:

1. I have reviewed this Annual Report on Form 10-K 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.
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Date: February 22, 2012

/s/ Jeffrey M. Leiden

Jeffrey M. Leiden
Chief Executive Officer and President

CERTIFICATION

I, Ian F. Smith, certify that:

1. I have reviewed this Annual Report on Form 10-K 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(s) 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.
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Date: February 22, 2012

/s/ Ian F. Smith

Ian F. Smith
Executive Vice President and Chief Financial Officer

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 Annual Report on Form 10-K for the year ended December 31, 2011 (the "Form 10-K") 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-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 22, 2012

/s/ Jeffrey M. Leiden

Jeffrey M. Leiden
Chief Executive Officer and President

Date: February 22, 2012

/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.
