

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549  
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FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 1997

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 0-19319

VERTEX PHARMACEUTICALS INCORPORATED  
(Exact name of registrant as specified in its charter)

MASSACHUSETTS 04-3039129  
(State of incorporation) (I.R.S. Employer Identification No.)

130 WAVERLY STREET  
CAMBRIDGE, MASSACHUSETTS 02139-4242  
(Address of principal executive offices) (Zip Code)

(617) 577-6000  
(Registrant's telephone number, including area code)

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

Common Stock, \$0.01 par value  
(Title of class)

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 of 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 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.

As of March 16, 1998 there were outstanding 25,267,905 shares of Common Stock, \$.01 par value per share. The aggregate market value of shares of Common Stock held by non-affiliates of the registrant, based upon the last sales price for such stock on that date as reported by The Nasdaq Stock Market, was approximately \$868,075,000.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement for the 1998 Annual Meeting of Stockholders to be held on May 27, 1998 are incorporated by reference into Part III.

The "Company" and "Vertex," as used in this Annual Report on Form 10-K, refer to Vertex Pharmaceuticals Incorporated.

This Annual Report on Form 10-K contains forward-looking statements based on current management expectations. When used in this Report, the words "expects" "anticipates," "estimates," "plans," "believes," and similar expressions are intended to identify forward-looking statements. Such statements are subject to risks and uncertainties. Factors that could cause actual results to differ from these expectations include, but are not limited to, those discussed in the section of Item 1 entitled "Risk Factors." These forward-looking statements speak only as of the date of this Report. The Company expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in the Company's expectations with regard thereto or any change in the events, conditions or circumstances on which any such statement is based.

Vertex is a registered trademark of Vertex Pharmaceuticals Incorporated, and Incel is a trademark of Vertex Pharmaceuticals Incorporated. CLEC is a registered trademark of the Company's subsidiary, Altus Biologics Inc.

## PART I

### ITEM 1. BUSINESS

Vertex is engaged in the discovery, development and commercialization of novel, small molecule pharmaceuticals for the treatment of diseases for which there are currently limited or no effective treatments. The Company is a leader in the use of structure-based drug design, an approach to drug discovery that integrates advanced biology, biophysics and chemistry in a coordinated and simultaneous fashion. The Company believes that this integrated approach is applicable to therapeutic targets in a broad range of diseases. Vertex's goal is to create a portfolio of highly specific, proprietary, small molecule drugs based on its knowledge of the atomic structure of proteins involved in the control of disease processes. The Company's drug candidates currently in clinical trials include amprenavir for the treatment of human immunodeficiency virus ("HIV") infection and acquired immune deficiency syndrome ("AIDS"), two compounds for treatment of cancer multidrug resistance ("MDR") and an inosine monophosphate dehydrogenase ("IMPDH") inhibitor for the treatment of autoimmune diseases. In addition, the Company has preclinical and research programs aimed at developing orally available small molecule compounds to treat inflammatory diseases, neurodegenerative diseases and hepatitis C infection.

#### Structure-Based Drug Design

Drugs are natural or synthetic compounds that interact with a target molecule, typically a protein, either to induce or to inhibit that molecule's function within the human body. Traditionally, pharmaceutical products have been discovered through the screening of thousands of compounds, either from existing chemical libraries or from fermentation broths, against a predictive assay for a particular disease target. The Company believes that traditional pharmaceutical discovery is an essentially random process which is costly and inefficient. Advances in biotechnology have led to another method of developing drugs based on the isolation and production of human recombinant proteins. The Company believes that this approach also has limitations because the resulting pharmaceuticals are large molecules that cannot be administered orally, are difficult to manufacture and have applications which are limited to the disease state in which the protein is involved.

Vertex is developing pharmaceutical products using a structure-based drug design approach, which is distinct from the traditional pharmaceutical and biotechnological approaches. By determining and modeling the three dimensional atomic structure of a target protein, the

Company intends to rationally design or alter chemical compounds to specifically interact with the targeted protein. The Company believes that structure-based drug design increases the chances for the discovery of multiple lead compounds for selected protein targets, including targets for which traditional drug discovery has met with limited success. Moreover, the Company believes that the structure-based drug design process may accelerate optimization of lead compounds, since modification of a lead compound may be undertaken with knowledge of the relationship between the compound's structure and its desired therapeutic effect, rather than through experimentation with randomly generated modifications to that compound.

The Company's approach to structure-based design is an integrated approach combining efforts in biology, biophysics and chemistry in a coordinated and simultaneous fashion. To acquire structural information, Vertex applies advanced biophysical and computational tools, including x-ray crystallography, nuclear magnetic resonance spectroscopy and high resolution computer modeling. As structural information is gathered, the Company uses combinatorial, computational and medicinal chemistry to design and produce novel, highly specific small molecule compounds that possess the characteristics required for therapeutic benefit. To arrive at initial lead compounds, the Company may use traditional approaches, such as screening chemical libraries, natural products or combinatorial libraries in addition to using known chemical compounds or may apply direct computational methods (de novo design). Throughout the process, the Company develops biological assays and proprietary animal models, some of which employ the latest advances in genomics techniques, in order to analyze the function of target proteins. Using these tools, the Company optimizes compounds for potency and pharmaceutical properties, including tolerability and pharmacokinetics, and manufacturability. The Company selects clinical candidates from among optimized compounds based on the results of in vitro and in vivo tests designed to predict the compounds' safety and efficacy.

Vertex expects to employ all of its core technologies from the initial phases of a program through the entire discovery process. Information generated through the application of one scientific technique becomes part of the information base from which further advances may be made by Vertex scientists using other development techniques. Using its approach to structure-based drug design, Vertex has demonstrated that it is able to solve atomic structures of target proteins, generate lead compounds that bind to the target in vitro and optimize those compounds to produce drug candidates with desirable pharmaceutical attributes. The Company believes that its integrated structure-based approach to drug discovery and the applicability of this approach to a broad range of protein targets provides the Company with significant competitive advantages in the discovery and development of novel therapeutics for a variety of diseases.

#### Corporate Strategy

Vertex is concentrating on the discovery and development of drugs for the treatment of viral diseases, multidrug resistance in cancer, autoimmune diseases, inflammatory diseases and neurodegenerative diseases. The Company's research and development strategy is to identify therapeutic areas in which there is (i) an unmet clinical need, (ii) evidence that interaction with known protein targets will produce a therapeutic effect and (iii) evidence that the protein targets will be appropriate for structural analysis using Vertex's scientific approach. The Company's business strategy is to form collaborations with pharmaceutical companies in programs for which they can provide resources and access to competencies complementary to Vertex's in-house capabilities.

#### Product Development and Research Programs

The following are the Company's most advanced product development and research programs.

## Clinical Development Programs

### HIV Program

#### Overview

Vertex is developing orally deliverable antiviral drugs to treat HIV infection and AIDS. Vertex's HIV Program is focused on the HIV protease, a key enzyme involved in viral replication. The Company is collaborating with Glaxo Wellcome plc. ("Glaxo Wellcome") and Kissei Pharmaceutical Co., Ltd. ("Kissei") in the development of its most advanced HIV protease inhibitor, amprenavir (VX-478 or 141W94). Glaxo Wellcome has been conducting pivotal Phase III clinical trials of amprenavir since early 1997. These Phase III clinical trials are intended to support the submission of a New Drug Application ("NDA") for market approval in the United States and equivalent submissions in Europe and other territories. However, there can be no assurance that these clinical trials will result in the submission or approval of an NDA for amprenavir.

#### Background

Recent World Health Organization ("WHO") estimates place the number of people infected with HIV at 860,000 in the United States in 1997. The U.S. Centers for Disease Control ("CDC") estimates that 240,000 HIV-infected individuals in the United States have progressed to and are living with AIDS. The WHO recently revised upward estimates of worldwide HIV prevalence to 30.6 million, with 5.8 million new infections and 2.3 million deaths in 1997.

With the advent of combination therapy strategies and the introduction of several new drugs, world sales of antiviral drugs for the treatment of HIV have increased fivefold over a period of two years, reaching approximately \$2.5 billion in 1997. Despite this dramatic market increase and the success of new agents, there remains a significant need for new therapeutic options for the management of HIV infection. In the United States and elsewhere, the majority of HIV-infected patients are undiagnosed and untreated with any antiviral drug.

Three classes of antiviral drugs - nucleoside reverse transcriptase inhibitors ("NRTIs"), non-nucleoside reverse transcriptase inhibitors ("NNRTIs"), and protease inhibitors - are currently approved for the treatment of HIV/AIDS. NRTIs (which include AZT, ddI, ddC and 3TC) and NNRTIs (which include nevirapine and delavirdine) both act by inhibiting reverse transcriptase, a viral enzyme required for replication. The clinical utility of each of these drugs is limited by significant side effects and by the development of viral resistance. HIV protease inhibitors work by an alternative mechanism, blocking another viral enzyme involved in HIV replication. Indinavir, saquinavir, ritonavir, and nelfinavir are protease inhibitors that have received U.S. Food and Drug Administration ("FDA") marketing approval. However, clinician and patient acceptance of these products may be limited by complex dosing regimens, which can result in poor patient compliance, and by dose-limiting side effects. Amprenavir is being studied using twice daily dosing, without restrictions regarding dosing with or without food, in contrast with certain of the currently available protease inhibitors which are approved for dosage three times daily with food restrictions. The Company believes that amprenavir will compare favorably with the protease inhibitors currently on the market in terms of potency, tolerability, dosing regimen and resistance profile, even if twice-daily dosing regimens now being studied for some of the other protease inhibitors receive FDA approval. See "Risk Factors--Early Stage of Development; Technological Uncertainty" and "--Rapid Technological Change and Competition."

#### Clinical Status

Amprenavir is a second generation HIV protease inhibitor designed by Vertex to effectively

block the replication of HIV and to possess key competitive characteristics. Through a series of advanced clinical studies, underway or planned by Glaxo Wellcome, amprenavir is being assessed in a wide array of clinical trials for the treatment of HIV and AIDS. Glaxo Wellcome is conducting three Phase III pivotal clinical trials in the US, Canada and Europe to assess the tolerability and antiviral activity of amprenavir in combination therapy in HIV-positive adults and children. Two Phase III clinical trials, including one trial comparing amprenavir with indinavir, are fully enrolled. Three different formulations of amprenavir are being tested in clinical trials: a 150 mg capsule, a 50 mg capsule, and an oral solution. Amprenavir is being studied in Phase III pediatric trials utilizing the 50 mg capsule or the oral solution. Data generated from 16 weeks of treatment in the Phase III studies is intended to support filing for market approval of amprenavir. Glaxo Wellcome is expected to file an NDA in the United States later in 1998 and to seek regulatory approval for amprenavir in Europe and other countries shortly thereafter. However, there can be no assurance that clinical trials will result in the submission or approval of an NDA for amprenavir or that trials that have not yet begun will commence. See "Risk Factors -- Uncertainties Related to Clinical Trials."

In addition to the Phase III trials discussed above, Phase II trials are being conducted evaluating amprenavir in combination with available and/or experimental protease inhibitors, NRTIs, and NNRTIs. One study compares the combinations of amprenavir and nelfinavir, amprenavir and indinavir, amprenavir and saquinavir (soft gel caps), and amprenavir and the nucleoside analogues 3TC and AZT over 16 weeks of treatment. Preliminary results presented in February 1998 at the 5th Conference on Retroviruses and Opportunistic Infections in Chicago indicate that combining amprenavir with any one of three currently available protease inhibitors may result in highly potent antiviral regimens that appear to be generally well tolerated by patients.

Data from other studies presented at the same meeting suggested that amprenavir in combination with Glaxo Wellcome's investigational NRTI abacavir (1592) results in highly potent antiviral activity. In one study, 11 of 11 patients evaluated at 24 weeks achieved 99.9% reduction in viral load. This result was consistent with another trial that compared amprenavir/abacavir therapy with other protease inhibitor/abacavir combinations.

Data from these trials are preliminary and incomplete. Many trials are ongoing. There can be no assurance that these results are predictive of results that will be obtained in any future clinical trials. See "Risk Factors -- Uncertainties Related to Clinical Trials."

In 1995, Kissei completed single dose and multi-dose, placebo-controlled, Phase I clinical trials. Vertex expects that in 1998 Kissei will initiate Phase II/III efficacy trials in HIV-positive patients in Japan and that the results of such trials, together with clinical data from the Glaxo Wellcome trials, could form the basis for a filing for marketing approval of amprenavir in Japan. There can be no assurance, however, that these clinical trials will commence or proceed as currently anticipated. See "Risk Factors -- Uncertainties Related to Clinical Trials" and "-- Dependence on Collaborative Partners."

In collaboration with Glaxo Wellcome, Vertex is also engaged in research to develop new formulations of amprenavir. In addition, Vertex and Glaxo Wellcome are continuing efforts to develop new lead classes of HIV protease inhibitors.

The Company has four issued United States patents, 13 United States patent applications pending (including two which are under a Notice of Allowance), and foreign counterparts to some of those applications, that claim classes of chemical compounds, pharmaceutical formulations and/or uses of the same for treating HIV infection and AIDS. Two of the issued patents and five of the 13 United States patent applications (including both applications under a Notice of Allowance), have claims that include amprenavir, the Company's lead drug candidate for treating HIV infection and AIDS, pharmaceutical formulations containing amprenavir or the use of amprenavir to treat HIV infection or AIDS-related central nervous system disorders within their

literal scope. In addition, the Company has one issued United States patent that claims processes for preparing synthetic intermediates useful in the synthesis of a class of compounds that includes amprenavir. The Company also has a non-exclusive, worldwide license under certain G.D. Searle & Company ("Searle") patent applications claiming HIV protease inhibitors.

## Cancer Multidrug Resistance Program

### Overview

Vertex is developing novel compounds to treat and prevent the occurrence of drug resistance associated with the failure of cancer chemotherapy by inhibiting cellular mechanisms believed to be responsible for MDR. Vertex is developing two compounds, Incel(TM) (biricodar dicitrate; VX-710) and VX-853, that block two major multidrug resistance mechanisms, P-glycoprotein ("MDR1") and multidrug resistance associated protein, ("MRP"). Incel, an intravenous compound, and VX-853, an oral compound, are intended to be administered in combination with cancer chemotherapy agents, such as doxorubicin and paclitaxel. Vertex is conducting Phase II clinical trials of Incel in liver and breast cancer. In addition, BioChem Therapeutic, Inc. ("BioChem"), a subsidiary of Biochem Pharma (International) Inc., Vertex's partner for the development and marketing of Incel in Canada, is conducting Phase II clinical trials of Incel in soft tissue sarcoma and ovarian cancer. Vertex is conducting a Phase I/II clinical trial of VX-853, initiated in 1996, in patients with solid tumors.

### Background

The American Cancer Society estimates that during 1998 more than 1.2 million people in the United States will be diagnosed with invasive cancer and more than 560,000 people in the U.S. will die from such cancers. The Company believes that a significant number of these patients may not be effectively treated by chemotherapy because of MDR.

Multidrug resistance is frequently associated with the failure of chemotherapy. A major contributing factor to MDR is the presence of molecular pumps, including MDR1 and MRP, that function to expel chemotherapeutic agents from cancer cells, preventing the sustained delivery of potent levels of the chemotherapeutic agents required for therapeutic benefit. As a consequence, such resistant tumor cells cannot be killed efficiently by anticancer drugs such as doxorubicin, vincristine, etoposide and paclitaxel. MDR1 has been implicated in MDR in a variety of cancers including liver cancer, breast cancer, soft tissue sarcoma, prostate cancer, colon cancer, pancreatic cancer, acute myelogenous leukemia, multiple myeloma and certain lung cancers. MRP was recently identified as another drug efflux pump and is believed responsible for resistance observed in additional tumor types.

No drug has been approved by the FDA specifically for the treatment of MDR, but several compounds are in advanced clinical studies. Certain agents, such as dex-verapamil and an analog of cyclosporin A, have been shown in preliminary human studies to have some effectiveness in overcoming clinical resistance to certain commonly used chemotherapeutic agents. The Company believes these drugs may have side effects that could limit broad use.

### Clinical Status

Vertex's lead compound, Incel, has displayed potent activity in vitro as an inhibitor of MDR for a number of chemotherapeutic agents in a variety of tumor types. Vertex has completed two Phase I/II studies with Incel in combination with doxorubicin and with paclitaxel. Vertex initiated a Phase II multi-center clinical trial in June 1996 to assess the safety and efficacy of the co-administration of Incel and doxorubicin in patients with liver cancer in comparison with doxorubicin alone. In 1997, the Company initiated a Phase II multi-center trial to assess the safety

and efficacy of the co-administration of Incel and paclitaxel in patients with breast cancer. In addition, in 1997 BioChem initiated Phase II clinical trials of Incel in combination with paclitaxel in patients with ovarian cancer and in combination with doxorubicin in patients with soft tissue sarcoma. The Company intends to expand its Incel clinical development program to explore a variety of alternative indications for the drug. However, there can be no assurance that clinical trials will commence or proceed as currently anticipated. See "Risk Factors -- Uncertainties Related to Clinical Trials," "-- Manufacturing Uncertainties; Reliance on Third Party Manufacturers" and "-- Dependence on Collaborative Partners."

A Phase I/II dose-escalating clinical trial of VX-853 in combination with doxorubicin in patients with solid tumors is being conducted, based on Vertex research that showed that VX-853 potentially blocks MDR mediated by both MDR1 and MRP. The current clinical trial is expected to provide data regarding the safety of VX-853 at various dose levels, alone and in combination with escalating doses of doxorubicin.

The Company has five issued United States patents, two United States patent applications pending (one of which is under a Notice of Allowance) and several foreign counterpart applications claiming Incel and other compounds for treating multidrug resistance. One of the issued United States patents claims Incel and structurally related compounds. One of the issued United States patents claims VX-853 and structurally related compounds. The Company may seek orphan drug status for certain indications of its MDR compounds. See "Risk Factors - Extensive Government Regulation; Uncertainty of Product Clearance and Approval."

## IMPDH Program

### Overview

Vertex is developing novel, orally deliverable immunosuppressive drugs that it believes could selectively halt the growth of lymphocytes by blocking IMPDH, an enzyme which controls DNA synthesis in lymphocytes. In 1997, Vertex initiated a Phase I clinical trial with VX-497, a novel, orally administered IMPDH inhibitor designed by Vertex.

### Background

IMPDH is an enzyme involved in the immune response that enables lymphocyte proliferation and recruitment by catalyzing a key step in one of two DNA nucleotide biosynthesis pathways. IMPDH inhibition appears to selectively suppress immune system cells while leaving other cells unaffected, and may play an important role in down regulating inappropriate immune responses common to a range of human diseases, including asthma, psoriasis, rheumatoid arthritis and systemic lupus, as well as with transplant rejection. Vertex believes that blocking the enzyme IMPDH with an oral compound designed to specifically bind to IMPDH may provide a novel way to inhibit the progress of autoimmune diseases. IMPDH inhibition may also have an anti-inflammatory effect that may be useful in certain indications.

The Company is aware of only one specific inhibitor of IMPDH currently on the market in the United States, Hoffmann-La Roche's mycophenolate mofetil, which is approved for acute kidney transplant and heart transplant rejection. The Company believes that compound-specific side effects of mycophenolate mofetil may limit its use for chronic autoimmune disorders. See, however, "Risk Factors--Early Stage of Development; Technological Uncertainty" and "--Rapid Technological Change and Competition."

## Clinical Status

Vertex research, using cluster-based screening to sort families of compounds as potential inhibitors, led to the selection of VX-497 as a lead candidate in 1996. VX-497 has displayed potent immunosuppressive activity in animal models of rheumatoid arthritis and organ transplant rejection. A Phase I clinical trial is currently under way to test the pharmacokinetics and tolerability of VX-497 in escalating single doses in healthy subjects in the United Kingdom. The Company plans to follow the current Phase I clinical trial with multidose safety studies. Data from Phase I studies will be used by Vertex to design dose-ranging trials to assess the safety and efficacy of VX-497 in one or more indications. Phase II clinical trials in one or more indications are planned for 1998. There can be no assurance, however, that clinical trials will commence or proceed as currently anticipated. See "Risk Factors -- Early Stages of Development; Technological Uncertainty," "-- Manufacturing Uncertainties; Reliance on Third Party Manufacturers" and "-- Uncertainties Related to Clinical Trials."

The Company has five United States patent applications pending, claiming inhibitors of IMPDH, including VX-497 and related compounds. The Company has two United States patent applications pending that claim the crystal structure of IMPDH and the use of that structure to design inhibitors.

## Preclinical Development Programs

### ICE Program

#### Overview

Vertex is developing novel drugs to treat acute and chronic inflammatory conditions, including rheumatoid arthritis and osteoarthritis. The Company is collaborating with Hoechst Marion Roussel ("HMR") in the development of VX-740 to block interleukin-1 beta converting enzyme ("ICE"), which mediates the production and release of the inflammatory cytokine IL-1 beta, as well as the production of gamma interferon. Inside specialized immune system cells, ICE activates the proteins interleukin-1 beta (IL-1 beta) and gamma interferon, and triggers a cascade of events that produces inflammation. Vertex and HMR scientists have designed several classes of small molecule ICE inhibitors, including VX-740, the development candidate in the collaboration. Inhibitors of ICE may have application to a wide range of chronic and acute inflammatory diseases, such as rheumatoid arthritis, osteoarthritis, inflammatory bowel disease, sepsis, and pancreatitis.

### Background

Elevation of IL-1 beta levels has been correlated to a number of acute and chronic inflammatory diseases. There are approximately 2,100,000 patients with rheumatoid arthritis in the United States alone. Numerous companies are seeking to develop drugs to treat these conditions through various mechanisms. However, although several companies are pursuing ICE as a drug target, Vertex is not aware of any company with an ICE-inhibiting compound in clinical development, and there currently are no IL-1 beta inhibitors approved for marketing.

### Preclinical Status

VX-740 has been designed by Vertex and HMR as a potential small molecule inhibitor of ICE that could be used for the treatment of both acute and chronic inflammatory disorders. VX-740 has been shown to be orally active in several animal models of human inflammatory disease, including models for acute and chronic arthritis. In December 1997, Vertex announced that it had earned the first of a series of milestone payments to be made by HMR to Vertex as VX-740



advances through preclinical development, clinical development and commercialization. The \$3.0 million milestone payment related to progress made in the preclinical development of VX-740 in 1997. Phase I clinical trials are planned to start in 1998 for VX-740. However, there can be no assurance that clinical trials will commence or proceed as currently anticipated. See "Risk Factors--Uncertainties Related to Clinical Trials," "--Manufacturing Uncertainties; Reliance on Third Party Manufacturers" and "--Dependence on Collaborative Partners." Based on Vertex's discovery of the ICE's role in the production of gamma interferon, a key immunoregulator that modulates antigen presentation, T-cell activation, and cell adhesion, Vertex also plans to investigate ICE inhibitors for additional therapeutic uses such as in metastatic cancer, and diabetes.

The Company has 10 issued United States patents, 28 United States patent applications pending and several foreign counterpart patent applications claiming inhibitors of ICE, including a series of patents and applications purchased from Sanofi S.A., in July 1997. The Company has two patent applications pending in the United States and several foreign counterpart applications claiming the crystal structure of ICE and derivatives thereof and various uses of those structures. The company also has one United States patent that claims DNA sequences encoding ICE. That patent, which was purchased from Sanofi S.A., is currently involved in an interference in the United States Patent and Trademark Office.

#### Research Programs

##### Neurophilin Program

Vertex has designed orally administerable small molecule compounds that promote nerve growth in central and peripheral nerve injury. Data supporting the nerve regeneration in spinal cord and peripheral nerve injury models were presented at the Society for Neuroscience 27th Annual Meeting in October 1997. Vertex is testing neurophilin compounds in additional animal models of nerve injury with the goal of selecting a compound for development to treat neurodegenerative diseases, such as Alzheimer's and Parkinson's diseases, peripheral neuropathies, which result from degeneration of sensory and motor nerves, as well as to treat nerve injury resulting from trauma or stroke. The Company expects to select a compound in 1998 as a clinical development candidate.

The Company has five United States patent applications (one of which is under a Notice of Allowance) claiming the use of certain of its immunosuppressive compounds and certain of its multidrug resistance compounds for nerve growth applications. The Company also has nine issued United States patents and three United States patent applications pending (one of which is under a Notice of Allowance) that claim compounds that are useful in nerve growth applications.

##### MAP Kinase Program

The mitogen-activated protein (MAP) kinases are a family of structurally-related human enzymes involved in intracellular signaling pathways that enable cells to respond to their environment. Vertex is designing and developing compounds that inhibit cytokine translation by blocking MAP kinases.

Vertex's first MAP kinase research program focuses on the p38 MAP kinase, a human enzyme involved with the onset and progression of inflammation and programmed cell death. When activated, the p38 MAP kinase triggers production of interleukin-1 ("IL-1") and tumor necrosis factor TNF-alpha, cytokines that play a central role in the body's inflammatory response. Excess levels of IL-1 and TNF-alpha are associated with a broad range of acute and chronic inflammatory diseases, as well as playing an important role in programmed cell death associated with ischemia and stroke, and in neurodegenerative diseases such as Alzheimer's and Parkinson's disease. In 1997 Vertex and Kissei signed an agreement to collaborate on the design, development and commercialization of inhibitors of p38 MAP kinase. The objective of the research collaboration is to identify and extensively evaluate compounds that target p38 MAP kinase to develop novel, orally active drugs for the treatment of inflammatory and neurological diseases. Vertex and Kissei

researchers are currently evaluating compounds in animal models and initial preclinical toxicology tests to determine a potential clinical candidate. Vertex expects to advance a compound from this program to preclinical testing in 1998. However, there can be no assurance that studies will commence or proceed as currently anticipated.

Vertex has two United States patent application pending claiming inhibitors of p38 MAP kinase. Vertex also has one United States patent application pending claiming methods of designing inhibitors of MAP kinases.

#### Hepatitis C Virus Programs

The Company is conducting two discovery research programs to develop compounds to treat hepatitis C. Identified in 1989, the hepatitis C virus ("HCV") causes chronic inflammation in the liver. In a majority of patients, HCV establishes a chronic infection that can persist for decades and eventually lead to cirrhosis, liver failure and liver cancer. HCV infection represents a significant medical problem worldwide for which there is inadequate or no therapy for a majority of patients. Sources at the U.S. Centers for Disease Control and Prevention have estimated that approximately 3.9 million Americans, or more than one percent of the population, may be infected with HCV. Currently, there is no vaccine available to prevent hepatitis C infection. In addition, the only drug approved for the treatment of hepatitis C, interferon alpha, provides long-term therapeutic benefit to less than 25 percent of patients treated.

#### Hepatitis C Protease

Hepatitis C protease is an enzyme generally believed to be essential for replication of HCV. Under an agreement signed during 1997, Vertex and Eli Lilly and Company ("Lilly") are collaborating on the research, development and commercialization of novel, orally active protease inhibitors for the treatment of chronic infection caused by HCV, using structural information developed by Vertex researchers.

Vertex has one international patent application pending (which designates the United States among other countries) claiming inhibitors of HCV protease. Vertex also has one United States patent application pending claiming the crystal structure of HCV protease and the use of that structure to design inhibitors. Vertex has an additional United States patent application claiming methods of identifying HCV protease inhibitors.

#### Hepatitis C Helicase

Vertex is also conducting discovery research to design orally deliverable drugs to inhibit hepatitis C helicase. The NS3 helicase enzyme is believed to play an essential role in the infectious cycle of the hepatitis C virus by aligning viral DNA in its proper configuration for replication. Therefore, helicase represents an attractive target for drug discovery.

Researchers from Vertex have solved the three-dimensional atomic structure of the hepatitis C virus NS3 helicase. This achievement was described in a paper published on January 15, 1998 in the journal *Structure*. Vertex is using the structural information to identify and optimize inhibitors of the enzyme, employing structure-based techniques, including cluster-based screening, and computational, combinatorial, and medicinal chemistry, to design novel small molecule inhibitors of HCV helicase for clinical development as new antiviral drugs to treat HCV infection.

Vertex has one United States patent application pending disclosing the crystal structure of HCV helicase.

## Caspase Program

Vertex is conducting research to design novel drugs for apoptosis (programmed cell death) for neurodegenerative diseases and other neurodegenerative conditions. This drug discovery effort is based on the Company's knowledge of ICE and its homologues, the caspases. Vertex has gained a detailed understanding of apoptotic pathways using biological, genomic, and structural data from ICE homologues. Vertex has solved the X-ray structure of CPP32, a caspase believed to be important in neuronal apoptosis, and is using structural information to design small molecule lead compounds that selectively block CPP32 and other caspases. The goal of Vertex's caspases program is to discover and develop drugs useful for treating neurodegenerative disorders such as Alzheimer's disease and Parkinson's disease as well as for the prevention of tissue damage resulting from myocardial and cerebral ischemia.

The Company has one United States patent application claiming a protein involved in apoptosis.

## Corporate Collaborations

Vertex has entered into corporate collaborations with pharmaceutical companies that provide financial and other resources, including capabilities in research, development and sales and marketing, to support the Company's research and development programs. At present, the Company has the following major corporate collaborations.

### Glaxo Wellcome plc.

Vertex and Glaxo Wellcome are collaborating on the development of Vertex's HIV protease inhibitors. Under the collaborative agreement, which commenced in December 1993, Glaxo Wellcome is obligated to pay Vertex up to \$42.0 million, comprised of a \$15.0 million initial license payment paid in December 1993, \$14.0 million of product research funding over five years and \$13.0 million of development and commercialization milestone payments for an initial drug candidate. From the inception of the agreement in December 1993 through December 31, 1997, Vertex has recognized as revenue \$28 million. Glaxo Wellcome is also obligated to pay to Vertex additional development and commercialization milestone payments for subsequent drug candidates. In addition, Glaxo Wellcome is required to bear the costs of development in its territory under the collaboration. Glaxo Wellcome has exclusive rights to develop and commercialize Vertex HIV protease inhibitors in all parts of the world except the Far East and will pay Vertex a royalty on sales. Vertex has retained certain bulk drug manufacturing rights and certain co-promotion rights in the territories licensed to Glaxo Wellcome. See "-- HIV Program."

Glaxo Wellcome has the right to terminate the research collaboration under its agreement with the Company without cause upon twelve months' notice given at any time and has the right to terminate the license arrangements under its agreement with the Company without cause upon twelve months' notice, provided such notice is not given before the research collaboration has been terminated. Termination by Glaxo Wellcome of the research collaboration under its agreement with the Company will relieve Glaxo Wellcome of its obligation to make further research support payments under the agreement. Termination by Glaxo Wellcome of the license arrangements under the agreement will relieve Glaxo Wellcome of its obligation to make further commercialization and development milestone and royalty payments, and will end any license granted to Glaxo Wellcome by Vertex thereunder, and could have a material adverse effect on the Company's business and result of operations. See "Risk Factors -Dependence on Collaborative Partners."

Vertex and Glaxo Wellcome have a non-exclusive, worldwide license under certain Searle patent applications claiming HIV protease inhibitors to permit Vertex and Glaxo Wellcome to develop, manufacture and market amprenavir free of the risk of intellectual property claims by

Searle. The terms of the license require Vertex to pay Searle a royalty on sales. In connection with this transaction, Glaxo Wellcome purchased shares of the Company's Common Stock for approximately \$5.0 million in June 1996.

Kissei Pharmaceutical Co., Ltd.

Amprenavir

Vertex and Kissei are collaborating on the development of amprenavir, Vertex's HIV protease inhibitor. Under the collaborative agreement, which commenced in April 1993, Kissei is obligated to pay to Vertex up to \$20.0 million, comprised of \$9.8 million of product research funding over three years, \$7.0 million of development and commercialization milestone payments and a \$3.2 million equity investment. From the inception of the agreement in April 1993 through December 31, 1997, \$14.6 million has been recognized as revenue. During 1997, the Company also received \$4.0 million related to reimbursements of certain development costs. The Company has received the full amount of research funding specified under the agreement. Kissei has exclusive rights to develop and commercialize amprenavir in Japan, the People's Republic of China and several other countries in the Far East and will pay Vertex a royalty on sales. Vertex is responsible for the manufacture of bulk product for Kissei. See "-- HIV Program."

p38 MAP Kinase

In September 1997, the Company and Kissei entered into a collaborative agreement for the p38 MAP kinase program for the development and commercialization of novel, orally active drugs for the treatment of inflammatory and neurological diseases. Under the terms of the agreement, Kissei will pay the Company up to \$22 million composed of a \$4 million license payment paid in September 1997, \$11 million of product research funding over three years and \$7 million of development and commercialization milestone payments. From the inception of the agreement in September 1997 through December 31, 1997, \$5.5 million has been recognized as revenue. The Company and Kissei will collaborate to identify and extensively evaluate compounds that target p38 MAP kinase. Kissei will have the right to develop and commercialize these compounds in its licensed territories. Kissei has exclusive rights to p38 MAP kinase compounds in Japan and certain Southeast Asian countries and semi-exclusive rights in China, Taiwan and South Korea. The Company retains exclusive marketing rights in the United States, Canada, Europe, and the rest of the world. In addition, the Company will have the right to supply bulk drug material to Kissei for sale in its territory, and will receive royalties and drug supply payments on any product sales. Kissei has the right to terminate the agreement without cause upon six months' notice after June 1998. See "--MAP Kinase Program."

BioChem Therapeutic, Inc.

The Company and BioChem are collaborating on the development and commercialization of Incel, the Company's lead compound in its cancer multidrug resistance program. Under the collaborative agreement, which commenced in May 1996, BioChem is obligated to pay the Company up to \$4.0 million comprised of an initial license payment of \$500,000 and development and commercialization milestone payments. From the inception of the agreement in May 1996 through December 31, 1997, \$0.8 million has been recognized as revenue. BioChem also is obligated to bear the costs of development of Incel in Canada. BioChem has exclusive rights to develop and commercialize Incel in Canada. The Company will supply BioChem's requirements of bulk and finished forms of Incel. BioChem will make payments to the Company for those materials based on sales of products by BioChem, which will cover Vertex's cost of supplying materials and will provide a profit to Vertex.

BioChem has the right to terminate the agreement without cause upon six months' notice.

Termination will relieve BioChem of any further payment obligations and will end any license granted to BioChem by Vertex under the agreement. See "-- Cancer Multidrug Resistance Program."

Hoechst Marion Roussel

Vertex and HMR are collaborating on the development of ICE inhibitors as anti-inflammatory agents. Under the collaborative agreement, which commenced in September 1993, HMR is obligated to pay to Vertex up to \$30.5 million, comprised of \$18.5 million of product research funding over five years and \$12.0 million of development and commercialization milestone payments. From the inception of the agreement in September 1993 through December 31, 1997, \$21.5 million has been recognized as revenue. The Company received additional revenue related to reimbursements for clinical development in 1997. The Company has received the full amount of research funding specified under the agreement. HMR has exclusive rights to develop and market drugs resulting from the collaborative effort in Europe, Africa and the Middle East, and Vertex has exclusive development and marketing rights in the rest of the world, except the Far East, where Vertex shares those rights with HMR. HMR is obligated to pay a royalty to Vertex on any sales made in Europe, and Vertex is obligated to pay a royalty to HMR on any sales made in the United States or the rest of the Americas. Each party will have the option to co-promote products in the other party's exclusive territory. Vertex and HMR will each have rights to develop and market the drugs in Far Eastern countries including Japan.

HMR has the right to terminate the agreement at any time without cause upon twelve months' notice. For a period of one year after any such termination, HMR retains the right to select one or more compounds for development and to license such compound or compounds from Vertex, provided HMR resumes research funding and commercialization milestone payments and makes all such payments that would otherwise have been due but for such termination. See "-- ICE Program."

Eli Lilly & Company

In June 1997, Vertex and Lilly entered into a collaborative agreement for the research, development and commercialization of novel, small molecule compounds to treat hepatitis C infection. Under the terms of the agreement, Lilly will pay the Company up to \$51 million composed of a \$3 million up front payment paid in June 1997, \$33 million of product research funding over six years and \$15 million of development and commercialization milestone payments. From the inception of the agreement in June 1997 through December 31, 1997, \$5.7 million has been recognized as revenue. The Company and Lilly will jointly manage the research, development, manufacturing and marketing of drug candidates emerging from the collaboration. The Company will have primary responsibility for drug design, process development and pre-commercial drug substance manufacturing, and Lilly will have primary responsibility for formulation, preclinical and clinical development and global marketing. The Company has the option to supply 100 percent of Lilly's commercial drug substance supply needs. The Company will receive royalties on future product sales, if any. If the Company exercises its commercial supply option, the Company will receive drug supply payments in addition to royalties on future product sales, if any. Lilly has the right to terminate the agreement without cause upon six months' notice after June 1999. See "--Hepatitis C Protease."

Altus Biologics Inc.

Altus Biologics Inc. ("Altus") is a subsidiary of Vertex that develops, manufactures and markets a unique class of products based on a novel and proprietary technology for stabilizing proteins. This technology is used to create cross-linked protein crystals ("CLPCs"), facilitating the use of proteins in a broad array of applications, ranging from pharmaceutical to industrial uses. CLPCs are high-performance products designed to solve critical process chemistry and protein

stability issues in the development, manufacture and administration of pharmaceutical substances. Altus has concentrated its early development efforts on the application of the CLPC technology to enzymes, producing cross-linked enzyme crystals. In addition, responding to expressions of interest for other CLPCs to meet needs in a variety of areas, Altus intends to pursue with collaborators the development of its technology for other high value applications, such as consumer care products and catalysts for the destruction of chemical warfare agents. Since 1994, Altus has introduced 10 CLEC(R) products derived from five enzymes which are being used by pharmaceutical companies in trial and scale-up stages of pharmaceutical development and manufacturing. Over 300 organizations in 29 countries have purchased trial stage quantities of Altus' CLEC products, including over 70 companies which have purchased larger scale-up quantities.

As of March 17, 1998, Altus owned seven pending United States patent applications, and had been granted an exclusive, worldwide, royalty-free license to one issued United States patent, six pending United States patent applications and international and foreign counterparts thereof pursuant to an exclusive, worldwide, royalty-free license from Vertex. Altus has also filed international and foreign counterparts based on its United States patent applications. Altus is also a co-owner with Vertex of an additional United States patent application and an international counterpart thereof.

#### Patents and Proprietary Information

The Company has rights in certain patents and pending patent applications that relate to compounds it is developing and methods of using such compounds. The Company actively seeks, when appropriate, protection for its products and proprietary information by means of United States and foreign patents, trademarks and contractual arrangements. In addition, the Company relies upon trade secrets and contractual arrangements to protect certain of its proprietary information and products.

As of March 13, 1997, the Company had a total of 27 United States patents and 75 United States pending patent applications. The Company also has an exclusive license under four United States patents, one of which is subject to a reissue application that has been allowed. Three of the licensed patents and the allowed reissue application claim the use of certain compounds for treating hemoglobin disorders, including sickle cell disease and beta thalassemia. The Company has a non-exclusive, worldwide license under certain Searle patent applications claiming HIV protease inhibitors. The Company's non-exclusive, worldwide license permits Vertex to develop, manufacture and market amprenavir free of intellectual property claims by Searle. The Company has four issued United States patents and 13 United States patent applications claiming antiviral compounds, pharmaceutical formulations thereof and/or their uses, for treating HIV infection and AIDS. Two of those 13 United States patent applications are under a Notice of Allowance. Two of the issued patents and five of the 13 applications (including the two under a Notice of Allowance) have claims that include amprenavir, the Company's lead drug candidate, within their literal scope. Another one of the three issued patents contains claims covering the use of amprenavir to treat AIDS-related central nervous system disorders. The Company also has a United States patent that claims processes for preparing synthetic intermediates useful in the synthesis of a class of compounds that includes amprenavir.

The Company has five issued United States patents and two United States patent applications claiming Incel and other compounds for treating multidrug resistance. One of those issued patents contains claims covering Incel and structurally related compounds. Another of the issued patents claims VX-853 and structurally related compounds. The Company has five United States patent applications pending, claiming inhibitors of IMPDH, including VX-497 and related compounds. The Company has two United States patent applications pending that claim the crystal structure of IMPDH and the use of that structure to design inhibitors. The Company has ten issued

United States patents and 28 United States patent applications pending claiming inhibitors of ICE. The Company has two patent applications pending in the United States claiming the crystal structure of ICE and derivatives thereof and various uses of those structures. The company also has one United States patent that claims DNA sequences encoding ICE. That patent, which was purchased from Sanofi S.A., is currently involved in an interference in the United States Patent and Trademark Office with an application filed by Merck & Co. The Company has five United States patent applications pending claiming the use of certain of its immunosuppressive compounds and certain of its multidrug resistance compounds for nerve growth applications. Vertex recently received a Notice of Allowance in one of those applications. The Company also has nine issued United States patents and three patent applications pending that claim compounds that are useful in nerve growth application. The Company has one United States patent application claiming a protein involved in apoptosis. The Company has two United States patent application pending claiming inhibitors of p38 MAP kinase. The Company also has one United States patent application pending that claims methods of designing inhibitors of MAP kinase. The Company also has one international patent application pending (designating the United States and other countries) claiming inhibitors of HCV protease. The Company has one United States patent application pending claiming the crystal structure of HCV protease and the use of that structure to design inhibitors. The Company has one United States patent application pending claiming an assay for HCV protease activity. The Company has one United States patent application pending disclosing the crystal structure of HCV helicase. The Company has one United States patent application pending claiming methods of assaying and designing inhibitors of enzymes using proprietary technology. The Company has one United States patent application pending claiming processes useful in NMR technology. The Company has one United States patent claiming a novel device useful in pharmaceutical research. The Company also has filed international and foreign counterparts based on several of its United States patents and patent applications.

There can be no assurance that any patents will issue from any of the Company's patent applications or, even if patents issue or have issued, that the claims thereof will provide the Company with any significant protection against competitive products or otherwise be valuable commercially. Legal standards relating to the validity of patents and the proper scope of their claims in the biopharmaceutical field are still evolving, and there is no consistent policy regarding the breadth of claims allowed in biopharmaceutical patents. No assurance can be given as to the Company's ability to avoid infringing, and thus having to negotiate a license under, any patents issued to others, or that a license to such patents would be available on commercially acceptable terms, if at all. Further, there can be no assurance that any patents issued to or licensed by the Company will not be infringed by the products of others, which may require the Company to engage in patent infringement litigation. In addition to being a party to patent infringement litigation, the Company could be required to participate in interference proceedings declared by the United States Patent and Trademark Office. Defense or prosecution of patent infringement litigation, as well as participation in interference proceedings, can be expensive and time consuming, even in those instances in which the outcome is favorable to the Company. If the outcome of any such litigation or proceeding were adverse, the Company could be subject to significant liabilities to third parties, could be required to obtain licenses from third parties or could be required to cease sales of the affected products, any of which could have a material adverse effect on the Company. See "Risk Factors -- Uncertainty Related to Patents and Proprietary Information."

The Company has licensed on an exclusive basis four United States patents from Children's Hospital. One of those patents was subject to a reissue application for which the Company recently received a Notice of Allowance. The patents and the allowed reissue application claim the use of certain compounds in the treatment of hemoglobin disorders, including sickle cell disease and beta thalassemia. Because Children's Hospital did not foreign file the application corresponding to the reissue application within one year of filing its corresponding United States application, the Company's foreign patent rights may be limited. In addition, there can be no

assurance that others will not develop independently substantially equivalent technology, obtain access to the Company's know-how or be issued patents which may prevent the sale of Company products or require licensing and the payment of significant fees or royalties by the Company in order for it to carry on its business. Furthermore, there can be no assurance that any such license will be available.

Much of the Company's technology and many of its processes are dependent upon the knowledge, experience and skills of key scientific and technical personnel. To protect its rights to its proprietary know-how and technology, the Company requires all employees, consultants, advisors and collaborators to enter into confidentiality agreements that prohibit the disclosure of confidential information to anyone outside the Company. These agreements require disclosure and assignment to the Company of ideas, developments, discoveries and inventions made by employees, consultants, advisors and collaborators. There can be no assurance that these agreements will effectively prevent disclosure of the Company's confidential information or will provide meaningful protection for the Company's confidential information if there is unauthorized use or disclosure. Furthermore, in the absence of patent protection, the Company's business may be adversely affected by competitors who independently develop substantially equivalent technology. See "-- Corporate Collaborations," and "Risk Factors -- Dependence on Collaborative Partners" and "-- Uncertainty Relating to Patents and Proprietary Information."

#### Manufacturing

The Company relies on third party manufacturers to produce its compounds for preclinical and clinical purposes and may do so for commercial production of any compounds that are approved for marketing. The Company expects that commercial manufacturing of amprenavir will be done, at least initially, by Glaxo Wellcome. The Company has established a quality assurance program, including a set of standard operating procedures, intended to ensure that third party manufacturers under contract produce the Company's compounds in accordance with the FDA's current Good Manufacturing Practices ("cGMP") and other applicable regulations. See "-- Government Regulation."

The Company believes that all of its existing compounds can be produced using established manufacturing methods, primarily through standard techniques of pharmaceutical synthesis. The Company currently does not have the capacity to manufacture its potential products, is dependent on third party manufacturers or collaborative partners for the production of its compounds for preclinical research and clinical trial purposes and expects to be dependent on such manufacturers or collaborative partners for some or all commercial production of any of its compounds that are approved for marketing. The Company believes that it will be able to continue to negotiate such arrangements on commercially reasonable terms and that it will not be necessary for it to develop internal manufacturing capability in order to successfully commercialize its products. In the event that the Company is unable to obtain contract manufacturing, or obtain such manufacturing on commercially reasonable terms, it may not be able to commercialize its products as planned. The Company's objective is to maintain flexibility in deciding whether to develop internal manufacturing capabilities for certain of its potential products. The Company has limited experience in manufacturing pharmaceutical or other products or in conducting manufacturing testing programs required to obtain FDA and other regulatory approvals, and there can be no assurance that the Company will further develop such capabilities successfully.

Since the Company's potential products are at an early stage of development, the Company will need to improve or modify its existing manufacturing processes and capabilities to produce commercial quantities of any drug product economically. The Company cannot quantify the time or expense that may ultimately be required to improve or modify its existing process technologies, but it is possible that such time or expense could be substantial.



The production of Vertex's compounds is based in part on technology that the Company believes to be proprietary. Vertex may license this technology to contract manufacturers to enable them to manufacture compounds for the Company. There can be no assurance that such manufacturers will abide by any limitations or confidentiality restrictions in licenses with Vertex. In addition, any such manufacturer may develop process technology related to the manufacture of Vertex's compounds that such manufacturer owns either independently or jointly with the Company. This would increase the Company's reliance on such manufacturer or require the Company to obtain a license from such manufacturer in order to have its products manufactured. There can be no assurance that any such license would be available on terms acceptable to the Company, if at all.

Some of the Company's current corporate partners have certain manufacturing rights with respect to the Company's products under development, and there can be no assurance that such corporate partners' rights will not impede the Company's ability to conduct the development programs and commercialize any resulting products in accordance with the schedules and in the manner currently contemplated by the Company. See "Risk Factors -- Manufacturing Uncertainties; Reliance on Third Party Manufacturers."

#### Competition

The Company is engaged in pharmaceutical fields characterized by extensive research efforts, rapid technological progress and intense competition. There are many public and private companies, including pharmaceutical companies, chemical companies and biotechnology companies, engaged in developing products for the human therapeutic applications targeted by Vertex. Further, the Company believes that interest in the application of structure-based drug design and related technologies may continue and may accelerate as the technologies become more widely understood. The Company is aware of efforts by others to develop products in each of the areas in which the Company has products in development. In the field of HIV protease inhibition, Merck & Co., Inc., Abbott Laboratories, Inc., Hoffmann-La Roche, and Agouron Pharmaceuticals, Inc. have HIV protease inhibitor drugs that are already on the market. The Company is also aware of other companies that have HIV protease inhibitors in development. There also are a number of competitors that have products under development for the treatment of MDR in cancer. In order for the Company to compete successfully in these areas, it must demonstrate improved safety, efficacy, ease of manufacturing and market acceptance over its competitors, who have received regulatory approval and are currently marketing. Furthermore, academic institutions, governmental agencies and other public and private research organizations are conducting research to develop technologies and products that may compete with those under development by the Company. In addition, other technologies are, or may in the future become, the basis for competing products. There can be no assurance that the Company's competitors will not succeed in developing technologies and products that are more effective than any being developed by the Company or that would render the Company's technology and products obsolete or noncompetitive. In addition, there can be no assurance that the Company's products in development will be able to compete effectively with products which are currently on the market.

Many of the Company's competitors have substantially greater financial, technical and human resources than those of the Company. In addition, many of the Company's competitors have significantly greater experience than the Company in conducting preclinical testing and human clinical trials of new pharmaceutical products, and in obtaining FDA and other regulatory approvals of products. Accordingly, certain of the Company's competitors may succeed in obtaining regulatory approval for products more rapidly than the Company. If the Company obtains regulatory approval and commences commercial sales of its products, it will also compete with respect to manufacturing efficiency and sales and marketing capabilities, areas in which it currently has no experience. See "Risk Factors -- Rapid Technological Change and Competition."

## Pharmaceutical Pricing and Reimbursement

The Company's ability to commercialize its products successfully will depend in part on the extent to which appropriate reimbursement levels for the cost of such products and related treatment are obtained from government authorities, private health insurers and other organizations, such as health maintenance organizations ("HMOs"). Third party payors and government authorities are continuing efforts to contain or reduce the cost of health care. For example, in certain foreign markets, pricing and/or profitability of prescription pharmaceuticals are subject to government control. There can be no assurance that similar controls will not be implemented in the United States. Also, the trend toward managed health care in the United States and the concurrent growth of organizations such as HMOs, which could control or significantly influence the purchase of health care services and products, may result in lower prices for the Company's products. The cost containment measures that health care providers and third party payors are instituting and any proposed or future health care reform measures, including any reductions in Government reimbursement programs such as Medicaid and Medicare, could affect the Company's ability to sell its products and may have a material adverse effect on the Company.

The success of the Company's products in the United States and other significant markets will depend, in part, upon the extent to which a consumer will be able to obtain reimbursement for the cost of such products from government health administration authorities, third-party payors and other organizations. Significant uncertainty exists as to the reimbursement status of newly approved therapeutic products. Even if a product is approved for marketing, there can be no assurance that adequate reimbursement will be available. The Company is unable to predict what additional legislation or regulation relating to the health care industry or third-party coverage and reimbursement may be enacted in the future or what effect the legislation or regulation would have on the Company's business. Failure to obtain reimbursement could have a material adverse effect on the Company.

## Government Regulation

The Company's development, manufacture and potential sale of therapeutics are subject to extensive regulation by United States and foreign governmental authorities. In particular, pharmaceutical products are subject to rigorous preclinical and clinical testing and to other approval requirements by the FDA in the United States under the Food, Drug and Cosmetic Act and by comparable agencies in most foreign countries.

As an initial step in the FDA regulatory approval process, preclinical studies are typically conducted in animals to identify potential safety problems. For certain diseases, animal models exist that are believed to be predictive of human efficacy. For such diseases, a drug candidate is tested in an animal model. The results of the studies are submitted to the FDA as a part of the Investigational New Drug application ("IND"), which is filed to comply with FDA regulations prior to commencement of human clinical testing. For other diseases for which no appropriately predictive animal model exists, no such results can be filed. For several of the Company's drug candidates, no appropriately predictive model exists. As a result, no in vivo evidence of efficacy would be available until such compounds progress to human clinical trials.

Clinical trials are typically conducted in three sequential phases, although the phases may overlap. In Phase I, which frequently begins with the initial introduction of the drug into healthy human subjects prior to introduction into patients, the compound will be tested for safety, dosage tolerance, absorption, bioavailability, biodistribution, metabolism, excretion, clinical pharmacology and, if possible, for early information on effectiveness. Phase II typically involves studies in a small sample of the intended patient population to assess the efficacy of the drug for a specific indication, to determine dose tolerance and the optimal dose range and to gather additional information relating to safety and potential adverse effects. Phase III trials are undertaken to further

evaluate clinical safety and efficacy in an expanded patient population at geographically dispersed study sites, to determine the overall risk-benefit ratio of the drug and to provide an adequate basis for physician labeling. Each trial is conducted in accordance with certain standards under protocols that detail the objectives of the study, the parameters to be used to monitor safety and the efficacy criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND. Further, each clinical study must be evaluated by an independent Institutional Review Board ("IRB") at the institution at which the study will be conducted. The IRB will consider, among other things, ethical factors, the safety of human subjects and the possible liability of the institution.

Data from preclinical testing and clinical trials are submitted to the FDA in a New Drug Application ("NDA") for marketing approval. The process of completing clinical testing and obtaining FDA approval for a new drug is likely to take a number of years and require the expenditure of substantial resources. Preparing an NDA involves considerable data collection, verification, analysis and expense, and there can be no assurance that approval will be granted on a timely basis, if at all. The approval process is affected by a number of factors, including the severity of the disease, the availability of alternative treatments and the risks and benefits demonstrated in clinical trials. The FDA may deny an NDA if applicable regulatory criteria are not satisfied or may require additional testing or information. Among the conditions for marketing approval is the requirement that the prospective manufacturer's quality control and manufacturing procedures conform to the FDA's cGMP regulations, which must be followed at all times. In complying with standards set forth in these regulations, manufacturers must continue to expend time, monies and effort in the area of production and quality control to ensure full technical compliance. Manufacturing establishments, both foreign and domestic, also are subject to inspections by or under the authority of the FDA and by or under the authority of other federal, state or local agencies.

Even after initial FDA approval has been obtained, further studies, including post-marketing studies, may be required to provide additional data on safety and will be required to gain approval for the use of a product as a treatment for clinical indications other than those for which the product was initially tested. Also, the FDA will require post-marketing reporting to monitor the side effects of the drug. Results of post-marketing programs may limit or expand further marketing of the products. Further, if there are any modifications to the drug, including changes in indication, manufacturing process, labeling or manufacturing facilities, an NDA supplement may be required to be submitted to the FDA.

The Orphan Drug Act provides incentives to drug manufacturers to develop and manufacture drugs for the treatment of diseases or conditions that affect fewer than 200,000 individuals in the United States. Orphan drug status can also be sought for diseases or conditions that affect more than 200,000 individuals in the United States if the sponsor does not realistically anticipate its product becoming profitable from sales in the United States. Under the Orphan Drug Act, a manufacturer of a designated orphan product can seek tax benefits, and the holder of the first FDA approval of a designated orphan product will be granted a seven-year period of marketing exclusivity for that product for the orphan indication. While the marketing exclusivity of an orphan drug would prevent other sponsors from obtaining approval of the same compound for the same indication, it would not prevent other types of drugs from being approved for the same use. The Company may apply for orphan drug status for certain indications of MDR in cancer.

Under the Drug Price Competition and Patent Term Restoration Act of 1984, a sponsor may be granted marketing exclusivity for a period of time following FDA approval of certain drug applications if FDA approval is received before the expiration of the patent's original term. This marketing exclusivity would prevent a third party from obtaining FDA approval for a similar or identical drug through an Abbreviated New Drug Application ("ANDA"), which is the application form typically used by manufacturers seeking approval of a generic drug. The statute also allows a patent owner to extend the term of the patent for a period equal to one-half the period of time

elapsed between the filing of an IND and the filing of the corresponding NDA plus the period of time between the filing of the NDA and FDA approval. The Company intends to seek the benefits of this statute, but there can be no assurance that the Company will be able to obtain any such benefits.

Whether or not FDA approval has been obtained, approval of a drug product by regulatory authorities in foreign countries must be obtained prior to the commencement of commercial sales of the product in such countries. Historically, the requirements governing the conduct of clinical trials and product approvals, and the time required for approval, have varied widely from country to country.

In addition to the statutes and regulations described above, the Company is also subject to regulation under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act and other present and potential future federal, state and local regulations. See "Risk Factors -- Extensive Government Regulation."

Human Resources

As of December 31, 1997, Vertex had 220 full-time employees, including 165 in research and development, 25 in laboratory support services and 30 in general and administrative functions, and three part-time employees. The Company's scientific staff members (79 of whom hold Ph.D. and/or M.D. degrees) have diversified experience and expertise in molecular and cell biology, biochemistry, animal pharmacology, synthetic organic chemistry, protein x-ray crystallography, protein nuclear magnetic resonance spectroscopy, computational chemistry, biophysical chemistry, medicinal chemistry, clinical pharmacology and clinical medicine. In addition, the Company's Altus subsidiary had 24 full-time employees as of December 31, 1997. The Company's employees are not covered by a collective bargaining agreement, and the Company considers its relations with its employees to be good.

EXECUTIVE OFFICERS

The names, ages and positions held by the executive officers of the Company are as follows:

Name	Age	Position
Joshua S. Boger, Ph.D.....	46	Chairman, President and Chief Executive Officer
Richard H. Aldrich.....	43	Senior Vice President and Chief Business Officer
Vicki L. Sato, Ph.D.....	49	Senior Vice President of Research and Development and Chief Scientific Officer; Chair of the Scientific Advisory Board
Iain P. M. Buchanan.....	44	Vice President of European Operations; Managing Director of Vertex Pharmaceuticals (Europe) Limited
Thomas G. Auchincloss, Jr.....	36	Vice President of Finance and Treasurer

All executive officers are elected by the Board of Directors to serve in their respective capacities until their successors are elected and qualified or until their earlier resignation or

removal.

Dr. Boger is a founder of the Company and was its President and Chief Scientific Officer from its inception in 1989 until May 1992, when he became President and Chief Executive Officer. In 1997, Dr. Boger became Chairman, President and Chief Executive Officer. Dr. Boger has been a director since the Company's inception. Prior to founding the Company 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 is also a Director of Millennium Pharmaceuticals, Inc. and Altus biologics, Inc. 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. Aldrich served as Vice President of Business Development of the Company from June 1989 to May 1992, when he became Vice President and Chief Business Officer. In December 1993, Mr. Aldrich was promoted to Senior Vice President and Chief Business Officer. He joined Vertex from Integrated Genetics, where he headed that company's business development group. Previously, he served as Program Executive at Biogen, Inc., where he coordinated worldwide commercial development of several biopharmaceuticals, and as Licensing Manager at Biogen S.A. in Geneva, Switzerland, where he managed European and Far Eastern licensing. Mr. Aldrich previously worked at the Boston Consulting Group, an international management consulting firm. Mr. Aldrich received a B.S. degree from Boston College and an M.B.A. from the Amos Tuck School of Business, Dartmouth College.

Dr. Sato joined Vertex in September 1992 as Vice President of Research and was appointed Senior Vice President of Research and Development in September 1994. Previously, she was Vice President, Research and a member of the Scientific Board of Biogen, Inc. As research head at Biogen, she directed research programs in the fields of inflammation, immunology, AIDS therapy and cardiovascular therapy from early research into advanced product development. Dr. Sato received an A.B. in biology from Radcliffe College and A.M. and Ph.D. degrees from Harvard University. Following postdoctoral work in chemistry and immunology at the University of California at Berkeley and Stanford Medical School, she was appointed to the faculty of Harvard University in the Department of Biology. Dr. Sato is also a Director of Mitotix, Inc.

Mr. Buchanan joined the Company in April 1994 from Cilag AG, a subsidiary of Johnson & Johnson based in Zug, Switzerland, where he served as its Regional Licensing Director since 1987. He previously held the position of Marketing Director of Biogen, Inc. in Switzerland. Prior to Biogen, Mr. Buchanan served in Product Management at Merck Sharp & Dohme (UK) Limited. Mr. Buchanan holds a B.Sc. from the University of St. Andrews, Scotland.

Mr. Auchincloss joined the Company in October 1994 after serving as an investment banker at Bear, Stearns & Co. Inc. since 1988, most recently as Associate Director of the Corporate Finance Department. Prior to Bear Stearns, Mr. Auchincloss was a financial analyst for PaineWebber, Inc. Mr. Auchincloss holds a B.S. from Babson College and an M.B.A. from The Wharton School, University of Pennsylvania.

SCIENTIFIC ADVISORY BOARD

The Company's Scientific Advisory Board consists of individuals with demonstrated expertise in various fields who advise the Company concerning long-term scientific planning, research and development. The Scientific Advisory Board also evaluates the Company's research programs, recommends personnel to the Company and advises the Company on technological matters. The members of the Scientific Advisory Board, which is chaired by Dr. Vicki L. Sato, are:

- |                                 |   |
|---------------------------------|---|
| Vicki L. Sato, Ph.D.....        | Senior Vice President of Research and Development and Chief Scientific Officer, Vertex Pharmaceuticals Incorporated.  |
| Steven J. Burakoff, M.D.....    | Chair, Department of Pediatric Oncology, Dana-Farber Cancer Institute; Professor of Pediatrics, Harvard Medical School.   |
| Eugene H. Cordes, Ph.D.....     | Professor of Pharmacy and Chemistry, University of Michigan at Ann Arbor.   |
| Jerome E. Groopman, M.D.....    | Chief, Division of Experimental Medicine, Beth Israel Deaconess Medical Center; Recanati Chair of Medicine and Professor of Medicine, Harvard Medical School.   |
| Stephen C. Harrison, Ph.D.....  | Professor of Biochemistry and Molecular Biology, Harvard University; Investigator, Howard Hughes Medical Institute; Professor of Biological Chemistry and Molecular Pharmacology and Professor of Pediatrics, Harvard Medical School. |
| Jeremy R. Knowles, D. Phil..... | Dean of the Faculty of Arts and Sciences, Harvard University; Amory Houghten Professor of Chemistry and Biochemistry, Harvard University.   |
| Robert T. Schooley, M.D.....    | Tim Gill Professor of Medicine and Head of Infectious Disease, University of Colorado Health Sciences Center.   |

Other than Dr. Sato, none of the members of the Scientific Advisory Board is employed by the Company, and members may have other commitments to or consulting or advisory contracts with their employers or other entities that may conflict or compete with their obligations to the Company. Accordingly, such persons are expected to devote only a small portion of their time to the Company. In addition to its Scientific Advisory Board, Vertex has established consulting relationships with a number of scientific and medical experts who advise the Company on a project-specific basis.

## RISK FACTORS

The following risk factors should be considered carefully in addition to the other information contained in this Report.

### Early Stage of Development; Technological Uncertainty

The Company was founded in 1989 and has not generated any pharmaceutical product sales. To achieve profitable operations, the Company, alone or with others, must successfully develop, clinically test, market and sell its products. Any products resulting from the Company's product development efforts are not expected to be available for sale in the near future, if at all.

The development of new pharmaceutical products is highly uncertain and subject to a number of significant risks. Potential products that appear to be promising at early stages of development may not reach the market for a number of reasons. Such reasons include the possibilities that the potential products are found ineffective or cause harmful side effects during preclinical testing or clinical trials, fail to receive necessary regulatory approvals, are difficult or uneconomical to manufacture on a large scale, fail to achieve market acceptance or are precluded from commercialization by proprietary rights of third parties.

The products that the Company is pursuing will require extensive additional development, testing and investment, as well as regulatory approvals, prior to commercialization. No assurance can be given that the Company's product development efforts will be successful, that required regulatory approvals will be obtained or that any products, if introduced, will be commercially successful. Further, the Company has no sales and marketing capabilities, and even if the Company's products in development are approved for marketing, there can be no assurance that the Company will be able to develop such capabilities. In addition, only a limited number of drugs developed through structure-based drug design have completed clinical trials successfully, been approved by the FDA and been marketed. One of the Company's potential products, amprenavir, is an HIV protease inhibitor which is currently in Phase III clinical trials. To date, HIV has been shown to develop resistance to antiviral drugs, including currently marketed HIV protease inhibitors. There can be no assurance that such disease resistance or other factors will not limit the efficacy of the Company's HIV protease inhibitor. The clinical efficacy of the suppression of mechanisms of action of MDR in chemotherapy in the treatment of cancer is unproven, and, therefore, there can be no assurance that the Company's MDR compounds in development will improve the efficacy of chemotherapy. There also can be no assurance that drug candidates being pursued by the Company will be safe and efficacious, will receive regulatory approvals or will result in commercially successful products. If any of the Company's development programs is not successfully completed, required regulatory approvals are not obtained, or products for which approvals are obtained are not commercially successful, the Company's business, financial condition and results of operations would be materially adversely affected. See "Business -- Product Development and Research Programs."

### Uncertainties Related to Clinical Trials

Before obtaining required regulatory approvals for the commercial sale of products under development, the Company must demonstrate through preclinical studies and clinical trials that such products are safe and efficacious for use in each target indication. The results of preclinical and initial clinical trials of products under development by the Company are not necessarily predictive of results that will be obtained from large-scale clinical testing, and there can be no assurance that clinical trials of products under development will demonstrate the safety and efficacy of such products or will result in a marketable product. The safety and efficacy of a therapeutic product under development by the Company must be supported by extensive data from clinical trials. A number of companies have suffered significant setbacks in advanced clinical trials, despite promising results in earlier trials. The Company currently has four product candidates undergoing

clinical trials, amprenavir, Incel, VX-853 and VX-497. In addition, the Company has a number of products undergoing preclinical development. The data observed to date is preliminary, and there can be no assurance that the results of ongoing and future trials will be consistent with results observed in earlier clinical trials or will be sufficient for approval. The failure to demonstrate adequately the safety and efficacy of a therapeutic drug under development could delay or prevent regulatory approval of the product and could have a material adverse effect on the Company. In addition, the FDA may require additional clinical trials, which could result in increased costs and significant development delays.

The administration alone or in combination with other drugs of any product developed by the Company may produce undesirable side effects in humans. The occurrence of such side effects could interrupt, delay or halt clinical trials of such products and could ultimately prevent their approval by the FDA or foreign regulatory authorities for any or all targeted indications. The Company or the FDA may suspend or terminate clinical trials at any time if it is believed that the trial participants are being exposed to unacceptable health risks. Even after approval by the FDA and foreign regulatory authorities, products may later exhibit adverse effects that discourage widespread use or necessitate their withdrawal from the market. There can be no assurance that any products under development by the Company will be safe when administered to patients.

The rate of completion of clinical trials of the Company's products is dependent upon, among other factors, the rate of patient accrual. Patient accrual is a function of many factors, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial and the availability of clinical trial material. Delays in planned patient enrollment in clinical trials may result in increased costs, program delays or both, which could have a material adverse effect on the Company. There can be no assurance that if clinical trials are completed the Company will be able to submit an NDA or that any such application will be reviewed and approved by the FDA in a timely manner, if at all. See "Business -- Government Regulation."

#### Dependence on Collaborative Partners

The Company is engaged in research and development collaborations with Glaxo Wellcome, Kissei, BioChem, HMR, and Lilly, pursuant to which these parties have agreed to fund portions of the Company's research and development programs and/or to conduct certain research and development relating to specified products, in exchange for certain technology, product and marketing rights relating to those products. Some of the Company's current corporate partners have certain rights to control the planning and execution of product development and clinical programs, and there can be no assurance that such corporate partners' rights to control aspects of such programs will not impede the Company's ability to conduct such programs in accordance with the schedules and in the manner currently contemplated by the Company for such programs.

If any of the Company's corporate collaborators were to terminate its relationship with Vertex, it could have a material adverse effect on the Company's ability to fund related and other programs and to develop, manufacture and market any products that may have resulted from such collaboration. There can be no assurance that these collaborations will be completed or successful, or that the collaborative partners will not pursue alternative means of developing treatments for the diseases targeted by their collaborative programs with the Company. Glaxo Wellcome has the right to terminate the research collaboration under its agreement with the Company without cause at any time upon twelve months' notice and has the right to terminate the license arrangements under its agreement with the Company without cause upon twelve months' notice, provided such notice is not given before the research collaboration has been terminated. Termination by Glaxo Wellcome of the research collaboration under its agreement with the Company will relieve Glaxo Wellcome of its obligation to make further research support payments under the agreement. Termination by Glaxo Wellcome of the license arrangements under the agreement will relieve it of its obligation to make further commercialization and development milestone and royalty payments and will end any



license granted to Glaxo Wellcome by Vertex. HMR has the right to terminate its agreement with the Company without cause upon twelve months' notice at any time. Termination by HMR will relieve HMR of any further payment obligations under its agreement with the Company. In addition, for a period of one year after any such termination, HMR retains the right to select one or more compounds for development and to license such compound or compounds from Vertex, provided HMR resumes research funding and commercialization milestone payments and makes all such payments that would otherwise have been due but for such termination. Lilly has the right to terminate its agreement with the Company without cause upon six months' notice at any time after June 1999. Termination will relieve Lilly of any further payment obligations under its agreement with the Company and will also terminate any license granted to Lilly by Vertex. BioChem has the right to terminate its agreement with the Company without cause upon six month's notice. Termination will relieve BioChem of any further payment obligations under its agreement with the Company and will terminate any license granted to BioChem thereunder. Kissei has the right to terminate the p38 Map Kinase agreement without cause upon six months' notice after June 1998. Termination will relieve Kissei of any further payment obligations under that agreement with the Company and will also terminate any license granted to Kissei by Vertex thereunder.

The Company may seek additional collaborative arrangements to develop and commercialize its products in the future. There can be no assurance that the Company will be able to establish acceptable collaborative arrangements in the future or that such collaborative arrangements will be successful. In addition, there can be no assurance that collaborative partners will not pursue alternative technologies or develop alternative compounds either on their own or in collaboration with others, including the Company's competitors, as a means for developing treatments for the diseases targeted by their collaborative programs with the Company or that disagreements over rights to technology, other proprietary information or the course of the research and development program will not occur. Such events could result in the delay or cancellation of programs or product introduction even if regulatory approvals are obtained. See "Business -- Corporate Collaborations."

#### Rapid Technological Change and Competition

The Company is engaged in pharmaceutical fields characterized by extensive research efforts, rapid technological progress and intense competition. There are many public and private companies, including pharmaceutical companies, chemical companies and biotechnology companies, engaged in developing products for the human therapeutic applications targeted by Vertex. Further, the Company believes that interest in the application of structure-based drug design and related technologies may continue and may accelerate as the technologies become more widely understood. The Company is aware of efforts by others to develop products in each of the areas in which the Company has products in development. For example, Merck & Co., Inc., Abbott Laboratories, Inc., Hoffmann-La Roche, and Agouron Pharmaceuticals, Inc. have HIV protease inhibitors already on the market. The Company is also aware of other companies that have HIV protease inhibitors in development. There also are a number of competitors that have products under development for the treatment of MDR in cancer. In order for the Company to compete successfully in these areas, it must demonstrate improved safety, efficacy, ease of manufacturing and market acceptance over its competitors, who have received regulatory approval and are currently marketing. Furthermore, academic institutions, governmental agencies and other public and private research organizations are conducting research to develop technologies and products that may compete with those under development by the Company. In addition, other technologies are, or may in the future become, the basis for competing products. There can be no assurance that the Company's competitors will not succeed in developing technologies and products that are more effective than any being developed by the Company or that would render the Company's technology and products obsolete or noncompetitive. In addition, there can be no assurance that the Company's products in development will be able to compete effectively with products which are currently on the market.

Many of the Company's competitors have substantially greater financial, technical and human resources than those of the Company. In addition, many of the Company's competitors have significantly greater experience than the Company in conducting preclinical testing and human clinical trials of new pharmaceutical products, and in obtaining FDA and other regulatory approvals of products. Accordingly, certain of the Company's competitors may succeed in obtaining regulatory approval for products more rapidly than the Company. If the Company obtains regulatory approval and commences commercial sales of its products, it will also compete with respect to manufacturing efficiency and sales and marketing capabilities, areas in which it currently has no experience. See "Business -- Competition."

#### Manufacturing Uncertainties; Reliance on Third Party Manufacturers

The Company's ability to conduct clinical trials and its ability to commercialize its potential products will depend, in part, on its ability to manufacture its products on a large scale, either directly or through third parties, at a competitive cost and in accordance with FDA and other regulatory requirements. Furthermore, for all of the Company's drugs in development, completion of clinical trials and submission of an NDA will be subject to the establishment of a commercial formulation and manufacturing process. As manufacturing process development and formulation activities are ongoing throughout the development process, the Company or its collaborators may encounter difficulties at any time that could result in delays in clinical trials, regulatory submissions and commercialization of its products, or cause negative financial and competitive consequences. Manufacturing process development and formulation activities for VX-478 by the Company and Glaxo Wellcome are continuing while clinical trials are underway. There can be no assurance that such activities will be completed in a timely and successful manner, if at all. The failure to complete such activities in a timely and successful manner could have a material adverse effect on the business, financial condition or results of operations of the Company.

The Company currently does not have the capacity to manufacture its potential products and is dependent on third party manufacturers or collaborative partners for the production of its compounds for preclinical research and clinical trial purposes. The Company expects to be dependent on such manufacturers or collaborative partners for some or all commercial production of any of its compounds that are approved for marketing. In the event that the Company is unable to obtain contract manufacturing, or obtain such manufacturing on commercially reasonable terms, it may not be able to conduct or complete clinical trials or, if FDA approval is obtained, commercialize its products as planned. The Company has no experience in manufacturing pharmaceutical or other products or in conducting manufacturing testing programs required to obtain FDA and other regulatory approvals, and there can be no assurance that the Company will successfully develop such capabilities.

Some of the Company's current corporate partners have certain manufacturing rights with respect to the Company's products under development, and there can be no assurance that such corporate partners' manufacturing rights will not impede the Company's ability to conduct the development programs and commercialize any resulting products in accordance with the schedules and in the manner currently contemplated by the Company. See "Business -- Manufacturing."

#### Extensive Government Regulation; Uncertainty of Product Clearance and Approval

The FDA and comparable agencies in foreign countries impose substantial requirements on the introduction of therapeutic pharmaceutical products through lengthy and detailed laboratory and clinical testing procedures, sampling activities and other costly and time-consuming procedures. Satisfaction of these requirements typically takes several years or longer and may vary substantially based upon the type, complexity and novelty of the pharmaceutical product. The Company has had

only limited experience in conducting preclinical testing and human clinical trials. In addition, the Company has not received FDA or other regulatory approvals for any of its product candidates. Data obtained from preclinical and clinical activities are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. In addition, delays or rejections may be encountered based on changes in, or additions to, regulatory policies for drug approval during the period of product development and regulatory review.

The effect of government regulation may be to delay or prevent the commencement of clinical trials or marketing of Company products, if any are developed and submitted for approval, for a considerable period of time, to impose costly procedures upon the Company's activities and to provide a competitive advantage to larger companies or companies more experienced in regulatory affairs that compete with the Company. There can be no assurance that FDA or other regulatory approval for clinical trials or marketing of any products developed by the Company will be granted on a timely basis or at all. Delay in obtaining or failure to obtain such approvals would adversely affect the marketing of the Company's products and the Company's liquidity and capital resources. Moreover, even if approval is granted, such approval may entail limitations on the indicated uses for which a compound may be marketed. Even if such regulatory approval is obtained, a marketed drug or compound and its manufacturer are subject to continual review, and later discovery of previously unknown problems with a product or manufacturer may result in restrictions on such product or manufacturer, including withdrawal of the product from the market. Failure to comply with applicable regulatory requirements can, among other things, result in fines, suspensions of regulatory approvals, product recalls, operating restrictions and criminal prosecution. Further, additional government regulation may be established which could prevent or delay regulatory approval of the Company's products.

The Company may apply for orphan drug status for certain indications of MDR in cancer. Orphan drug status may, under present regulations, entitle the Company to certain marketing exclusivity and tax benefits. While the marketing exclusivity of an orphan drug would prevent other sponsors from obtaining approval of the same compound for the same indication, it would not prevent chemically distinct drugs from being approved for the same use. There can be no assurance that the Company will receive FDA orphan drug status for any of its compounds under development for which the Company seeks that status. Moreover, there can be no assurance that the scope of protection or the level of exclusivity that is currently afforded by orphan drug status will remain in effect in the future. See "Business -- Government Regulation."

The Company's research and development activities involve the controlled use of hazardous materials, chemicals and various radioactive compounds. The risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of an accident, the Company could be held liable for any damages or fines that result, and the liability could have a material adverse effect on the Company's business, financial condition and results of operations. There can be no assurance that statutes or regulations, applicable to the Company's business which impose substantial additional costs or otherwise materially adversely affect the Company's operations, will not be adopted.

#### Uncertainty Related to Patents and Proprietary Information

The Company's success will depend, in part, on its ability to obtain United States and foreign patent protection for its products and their uses, to preserve its trade secrets and to operate without infringing the proprietary rights of third parties. Because of the substantial length of time and expense associated with bringing new products through development and regulatory approval to the marketplace, the pharmaceutical industry places considerable importance on obtaining patents and maintaining trade secret protection for new technologies, products and processes. Patent protection may not be available, however, for compounds for use in certain medical indications, without a demonstration of how to use the compounds and proof in clinical trials that such

compounds may be useful for such target indications. As of March 13, 1998, the Company had a total of 27 United States patents and 75 pending United States patent applications. As of that date, the Company also had a non-exclusive, worldwide license under certain Searle patent applications claiming HIV protease inhibitors. The Company also has been granted an exclusive license under four United States patents, one of which has been subject to a reissue application and was recently allowed. The Company also has filed foreign counterparts to some of its United States patents and patent applications. There can be no assurance that patents will issue from any of the Company's pending or future patent applications. There can be no assurance that any issued, licensed, pending or future patent will not be infringed by the products of others or provide sufficient protection to exclude others from the Company's present or future technology or products. The Company has in the past licensed and may in the future license patent rights from others. There can be no assurance, however, that such licenses will provide adequate protection for the Company's products.

Issued United States patents are presumed valid under United States patent law. No assurance can be given, however, that one or more of the Company's issued patents will not be declared invalid by a court. Legal standards relating to the validity of patents and the proper scope of their claims in the biopharmaceutical field are still evolving, and there is no consistent law or policy regarding the valid breadth of claims in biopharmaceutical patents or the effect of prior art on them. Furthermore, no assurance can be given as to the degree of protection any patents will afford to the Company's technology or as to the Company's ability to avoid infringing the claims of the patents held by third parties. Further, there can be no assurance that a license to such patents would be available on terms acceptable to the Company, if at all. There also can be no assurance that any patents issued to or licensed by the Company will not be infringed by others.

In addition to being a potential party to patent infringement litigation, the Company could become involved in interference proceedings declared by the United States Patent and Trademark Office. Defense and prosecution of patent claims, as well as participation in interference proceedings, can be expensive and time-consuming, even in those instances in which the outcome is favorable to the Company. If the outcome of any such litigation or proceeding were adverse, the Company could be subject to significant liabilities to third parties, could be required to obtain licenses from third parties or could be required to cease sales of the affected products, any of which could have a material adverse effect on the Company.

In addition, there can be no assurance that others will not develop independently substantially equivalent technology, obtain access to the Company's know-how or be issued patents which may prevent the sale of the Company's products or require licensing and the payment of significant fees or royalties by the Company in order for it to carry on its business. Furthermore, there can be no assurance that any such license will be available.

The Company's management and scientific personnel have been recruited from other pharmaceutical and biotechnology companies and academic institutions. In many cases these individuals are conducting research in similar areas with which they were involved prior to joining Vertex. As a result, the Company, as well as these individuals, could be subject to allegations of violation of trade secrets and similar claims. See "-- Dependence on Collaborative Partners" and "Business -- Corporate Collaborations" and "-- Patents and Proprietary Information."

#### Future Capital Needs; Uncertainty of Additional Funding

The Company expects to incur substantially increased research and development and related supporting expenses as it designs and develops existing and future compounds and undertakes clinical trials of potential drugs resulting from such compounds. The Company also expects to incur substantial administrative and commercialization expenditures in the future and substantial

expenses related to the filing, prosecution, defense and enforcement of patent and other intellectual property claims. The Company's future capital requirements will depend on many factors, including the progress of its research and development programs, the scope and results of preclinical studies and clinical trials, the cost, timing and outcome of regulatory reviews, the costs involved in filing, prosecuting and enforcing patent claims, competing technological and market developments, the establishment of additional collaborative arrangements and the cost of manufacturing facilities and of commercialization activities and arrangements. The Company anticipates that it will finance these substantial cash needs with its existing cash reserves, together with interest earned thereon, future payments under its collaborative agreements with Glaxo Wellcome, HMR, Kissei, BioChem, and Lilly, facilities and equipment financing and additional collaborative agreements. To the extent that funds from these sources are not sufficient to fund the Company's activities, it will be necessary to raise additional funds through public offerings or private placements of debt or equity securities or other methods of financing. Any equity financings could result in dilution to the Company's then existing stockholders. Any debt financing, if available at all, may be on terms which, among other things, restrict the Company's ability to pay dividends (although the Company does not intend to pay dividends for the foreseeable future). If adequate funds are not available, the Company may be required to curtail significantly or discontinue one or more of its research, drug discovery or development programs, including clinical trials, or attempt to obtain funds through arrangements with collaborative partners or others that may require the Company to relinquish rights to certain of its technologies or products in research or development. No assurance can be given that additional financing will be available on acceptable terms, if at all. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

#### History of Operating Losses and Accumulated Deficit

Vertex has incurred losses since its inception in January 1989. As of December 31, 1997, the Company's accumulated deficit was approximately \$117 million. Losses have resulted principally from costs incurred in research and development of the Company's compounds in development, including clinical trials and material manufacturing costs, the Company's other research programs and from general and administrative costs. These costs have exceeded the Company's revenues, which to date have been generated primarily from collaborative arrangements, interest income and research grants. The Company expects to incur additional significant operating losses in the future and does not expect to achieve profitability from sales of its products in development for several years, if ever. The Company expects that losses will fluctuate from quarter to quarter and that such fluctuations may be substantial. There can be no assurance that the Company will ever achieve product revenues or profitable operations. Based on the Internal Revenue Code of 1986, as amended, and changes in the Company's ownership, utilization of net operating loss carry forwards and research and development credits for federal income tax purposes may be subject to annual limitations. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

#### Uncertainty Related to Pharmaceutical Pricing and Reimbursement

The Company's ability to commercialize its products successfully will depend in part on the extent to which appropriate reimbursement levels for the cost of such products and related treatment are obtained from government authorities, private health insurers and other organizations, such as health maintenance organizations ("HMOs"). Third party payors and government authorities are continuing efforts to contain or reduce the cost of health care. For example, in certain foreign markets, pricing and/or profitability of prescription pharmaceuticals are subject to government control. There can be no assurance that similar controls will not be implemented in the United States. Also, the trend toward managed health care in the United States and the concurrent growth of organizations such as HMOs, which could control or significantly influence the purchase of health care services and products, may result in lower prices for the Company's

products. The cost containment measures that health care providers and third party payors are instituting and any proposed or future health care reform measures, including any reductions in government reimbursement programs such as Medicaid and Medicare, could affect the Company's ability to sell its products and may have a material adverse effect on the Company.

The success of the Company's products in the United States and other significant markets will depend, in part, upon the extent to which a consumer will be able to obtain reimbursement for the cost of such products from government health administration authorities, third-party payors and other organizations. Significant uncertainty exists as to the reimbursement status of newly approved therapeutic products. Even if a product is approved for marketing, there can be no assurance that adequate reimbursement will be available. The Company is unable to predict what additional legislation or regulation relating to the health care industry or third-party coverage and reimbursement may be enacted in the future or what effect the legislation or regulation would have on the Company's business. Failure to obtain reimbursement could have a material adverse effect on the Company.

#### Absence of Sales and Marketing Experience

The Company currently has no experience in marketing or selling pharmaceutical products. The Company must either develop a marketing and sales force or enter into arrangements with third parties to market and sell any of its product candidates which are approved by the FDA. In the territories where the Company retains marketing and co-promotion rights, there can be no assurance that the Company will successfully develop its own sales and marketing experience or that it will be able to enter into marketing and sales agreements with others on acceptable terms, if at all. If the Company develops its own marketing and sales capability, it will compete with other companies that currently have experienced and well-funded marketing and sales operations. To the extent that the Company has or enters into co-promotion or other sales and marketing arrangements with other companies, any revenues to be received by the Company will be dependent on the efforts of others, and there can be no assurance that such efforts will be successful.

#### Dependence on Key Management and Qualified Personnel

The Company is highly dependent upon the efforts of its senior management and scientific team. The loss of the services of one or more members of the senior management and scientific team might impede the achievement of the Company's development objectives. Due to the specialized scientific nature of the Company's business, the Company is also highly dependent upon its ability to attract and retain qualified scientific, technical and key management personnel. There is intense competition for qualified personnel in the areas of the Company's activities, and there can be no assurance that the Company will be able to continue to attract and retain qualified personnel necessary for the development of its existing business and its expansion into areas and activities requiring additional expertise, such as clinical testing, government approvals, production and marketing. See "Human Resources."

#### Product Liability and Availability of Insurance

The Company's business will expose it to potential product liability risks that are inherent in the testing, manufacturing and marketing of pharmaceutical and other products developed by the Company. The use of the Company's products in clinical trials also exposes the Company to the possibility of product liability claims and possible adverse publicity. These risks will increase to the extent the Company's products receive regulatory approval and are commercialized. The Company maintains product liability insurance for clinical trials. The Company does not currently have any other product liability insurance. There can be no assurance that the Company will be able to maintain its existing insurance or be able to obtain or maintain such additional insurance as it may need in the future on acceptable terms or that the Company's existing insurance or any such

additional insurance will provide adequate coverage against potential liabilities.

#### Volatility of Share Price; Option Grants

Market prices for securities of companies such as Vertex are highly volatile, and the market for the securities of such companies, including the Common Stock of the Company, has from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of these particular companies. Factors such as announcements of results of clinical trials, technological innovations or new products by Vertex or its competitors, government regulatory action, public concern as to the safety of products developed by the Company or others, patent or proprietary rights developments and market conditions for pharmaceutical and biotechnology stocks, in general, could have a significant adverse effect on the future market price of the Common Stock.

As of December 31, 1997, the Company had outstanding options for the purchase of 4,702,000 shares of Common Stock at exercise prices ranging from \$6.48 per share to \$49.13 per share. Options for the purchase of 1,944,000 shares of Common Stock were exercisable as of that date.

#### Anti-Takeover Provisions

The Company's charter provides for staggered terms for the members of the Board of Directors. The Company's By-laws grant the Directors a right to adjourn annual meetings of stockholders, and certain provisions of the By-laws may be amended only with an 80% stockholder vote. Pursuant to the Company's Stockholder Rights Plan, each share of Common Stock has an associated preferred share purchase right (a "Right"). The Rights will not trade separately from the Common Stock until, and are exercisable only upon, the acquisition or the potential acquisition through tender offer by a person or group of 15% or more of the outstanding Common Stock. These charter and By-law provisions and the Company's Stockholder Rights Plan may discourage certain types of transactions involving an actual or potential change in control of the Company which might be beneficial to the Company or its stockholders.

Shares of any class or series of preferred stock may be issued by the Company in the future without stockholder approval and upon such terms as the 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. The issuance of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of discouraging a third party from acquiring a majority of the outstanding Common Stock of the Company. The Company has no present plans to issue any shares of any class or series of Preferred Stock.

#### ITEM 2. PROPERTIES

The Company leases an aggregate of approximately 134,000 square feet of laboratory and office space in five adjacent facilities at 40 Allston Street, 625 Putnam Avenue, 618 Putnam Avenue, 240 Sidney Street and 130 Waverly Street in Cambridge, Massachusetts. The lease to the 40 Allston Street, 618 Putnam Avenue and 240 Sidney Street facilities will expire in December 2003. The lease to the 625 Putnam Avenue facility will expire in December 2000 with an option to extend through 2003. The Company occupies approximately 60,000 square feet of space at 130 Waverly Street under a lease expiring in December 2005. In 1999 that lease will include an additional 40,000 square feet at 130 Waverly Street, with the lease as to that portion of the facility expiring in 2009. The Company has the option to extend the lease as to both portions of the facility for additional terms. In addition, the Company leases two smaller facilities totaling approximately 27,000 square feet at 345 Vassar Street and 60 Hamilton Street, also in Cambridge,

under leases expiring in 2000 with options to extend through 2002. The Company believes its facilities are adequate for its current needs. The Company believes it can obtain additional space on commercially reasonable terms.

ITEM 3. LEGAL PROCEEDINGS

The Company is not a party to any material legal proceedings.

ITEM 4. SUBMISSION OF MATTERS TO SECURITY HOLDERS

There were no matters submitted to a vote of security holders during the fourth quarter of the fiscal year ended December 31, 1997.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

The Company's Common Stock trades on the Nasdaq National Market ("Nasdaq") under the symbol "VRTX." The following table sets forth the high, low and last sale prices of each quarter for the Common Stock as reported by Nasdaq for the periods indicated.

1996	High	Low	Close
-----	-----	-----	-----
First quarter	\$29 7/8	\$22	\$26 1/2
Second quarter	38	26	30 3/8
Third quarter	36 1/4	23 1/4	29 1/2
Fourth quarter	40 1/4	28 7/8	40 1/4
1997	-----	-----	-----
-----	-----	-----	-----
First quarter	\$52 3/4	\$37 3/4	\$40 1/2
Second quarter	49 3/4	27 5/8	38 1/4
Third quarter	41 5/8	29 3/8	37 3/4
Fourth quarter	38 3/8	25 1/4	33

The last sale price of the Common Stock on March 16, 1998, as reported by Nasdaq, was \$35.06 per share. As of March 16, 1998, there were 273 holders of record of the Common Stock (approximately 7,200 beneficial holders).

The Company has never declared or paid any cash dividends on its Common Stock and currently expects that future earnings will be retained for use in its business.

Recent Sale of Unregistered Securities

None

ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data for each of the five years in the period ended December 31, 1997 are derived from the Company's Consolidated Financial Statements. This data should be read in conjunction with the Company's audited financial statements and related notes,



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

	Year Ended December 31,				
	1997	1996	1995	1994	1993
	(in thousands, except per share amounts)				
<b>Consolidated Statement of Operations Data:</b>					
<b>Revenues:</b>					
Collaborative and other research and development revenues.....	\$29,926	\$ 13,341	\$ 22,081	\$19,571	\$ 27,885
Investment income.....	13,873	5,257	5,453	3,574	1,409
<b>Total revenues.....</b>	<b>43,799</b>	<b>18,598</b>	<b>27,534</b>	<b>23,145</b>	<b>29,294</b>
<b>Costs and expenses:</b>					
Research and development.....	51,624	35,212	41,512	34,761	23,164
General and administrative.....	11,430	7,929	7,069	5,540	3,520
License Payment.....		15,000	--	--	--
Interest .....	576	462	481	439	493
<b>Total costs and expenses.....</b>	<b>63,630</b>	<b>58,603</b>	<b>49,062</b>	<b>40,740</b>	<b>27,177</b>
Net (loss) earnings before taxes.....	(19,831)	(40,005)	(21,528)	(17,595)	2,117
Tax provision.....	--	--	--	--	80
<b>Net (loss) profit.....</b>	<b>\$(19,831)</b>	<b>\$ (40,005)</b>	<b>\$ (21,528)</b>	<b>\$(17,595)</b>	<b>\$ 2,037</b>
<b>Basic and diluted net (loss) earnings per common share.....</b>	<b>\$ (0.82)</b>	<b>\$ (2.13)</b>	<b>\$ (1.25)</b>	<b>\$ (1.11)</b>	<b>\$ 0.16</b>
<b>Weighted average number of common shares outstanding:</b>					
Basic.....	24,264	18,798	17,231	15,818	12,384
Diluted.....	24,264	18,798	17,231	15,818	12,452

	December 31,				
	1997	1996	1995	1994	1993
<b>Consolidated Balance Sheet Data:</b>					
Cash, cash equivalents and investments	\$279,671	\$130,359	\$86,978	\$106,470	\$52,103
Total assets.....	295,604	143,499	98,981	116,175	60,992
Obligations under capital leases and debt, excluding current portion.....	5,905	5,617	4,912	4,729	4,208
Accumulated deficit.....	(116,775)	(96,944)	(56,939)	(35,411)	(17,816)
Total stockholders' equity.....	276,001	130,826	85,272	105,478	49,520

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

This discussion contains forward-looking statements which are subject to certain risks and uncertainties that can cause actual results to differ materially from those described. Factors that may cause such differences include but are not limited to those described in "Risk Factors." Readers are cautioned not to place undue reliance on these forward-looking statements which speak only as of the date hereof. The Company undertakes no obligation to publicly update or revise these forward-looking statements to reflect events or circumstances after the date hereof.

Since its inception in 1989, the Company has been engaged in the discovery, development and commercialization of novel, small molecule pharmaceuticals for the treatment of major diseases for which there are currently limited or no effective treatments. The Company is a leader in the use of structure-based drug design, an approach to drug discovery that integrates advanced biology, biophysics and chemistry. The Company is conducting research and development programs to develop pharmaceuticals for the treatment of viral diseases, multidrug resistance in cancer, inflammation, immunosuppression and neurodegenerative disorders.

To date, the Company has not received any revenues from the sale of pharmaceutical products. The Company's lead product candidate, amprenavir for the treatment of HIV infection, is presently undergoing Phase III clinical trials. If such clinical trials are concluded successfully and a New Drug Application is approved by the FDA and product sales, if any, commence, the Company will receive a royalty on sales of amprenavir by its partner Glaxo Wellcome plc ("Glaxo Wellcome"). However, there can be no assurance that Phase III clinical trials will be completed in a timely fashion, if at all, that such trials will be successful, or that any approval will be granted by the FDA. The Company has incurred operating losses since its inception and expects to incur a loss in 1998. The Company believes that operating losses may continue for the next several years even if significant royalties are realized on amprenavir sales because the Company is planning to make significant investments in research and development for its other potential products. The Company expects that losses will fluctuate from quarter to quarter and that such fluctuations may be substantial.

#### Results of Operations

Year Ended December 31, 1997 Compared with Year Ended December 31, 1996.

The Company's total revenues increased to \$43,799,000 in 1997 from \$18,598,000 in 1996. In 1997, revenues consisted of \$27,703,000 under the Company's collaborative agreements, \$13,873,000 in investment income, and \$2,223,000 in government grants and other income. The principle reasons for the increase in revenue in 1997 were the commencement of new collaborations with Eli Lilly and Company ("Lilly") on the Company's Hepatitis C program and with Kissei Pharmaceutical Co., Ltd. ("Kissei") on the Company's p38 MAP kinase program, in addition to greater investment income from higher levels of cash and investments. The 1997 collaborations with Lilly and Kissei included up front payments of \$3,000,000 and \$4,000,000, respectively, and collaborative revenue of \$2,694,000 and \$1,500,000, respectively. Other collaborative revenue in 1997 included \$4,310,000 from Kissei, \$8,660,000 from Hoechst Marion Roussel ("HMR"), which included a \$3,000,000 milestone payment in December 1997, \$3,275,000 from Glaxo Wellcome, and \$264,000 from others. Product research funding requirements under the HMR agreement ended on December 31, 1997, although HMR continues to have certain development funding obligations. In 1996, revenues consisted of \$12,013,000 under the Company's collaborative agreements, \$5,257,000 in investment income and \$1,328,000 in government grants and other income. Revenue from collaborative agreements consisted of \$6,289,000 from Glaxo Wellcome, \$4,196,000 from HMR, \$692,000 from Kissei, and \$836,000 from others.

The Company's total costs and expenses increased to \$63,630,000 in 1997 from \$58,603,000 in 1996. In 1996, the Company paid \$15,000,000 to obtain a non-exclusive, world-wide license under certain G.D. Searle & Co. ("Searle") patent applications claiming HIV protease inhibitors. Research and development expenses increased to \$51,624,000 in 1997 from \$35,212,000 in 1996 principally due to the commencement of pre-clinical development activities for drug candidates in the ICE and IMPDH programs as well as the continued expansion of the Company's core scientific staff. In addition, general and administrative expenses increased to \$11,430,000 in 1997 from \$7,929,000 in 1996. The increase in general and administrative expense principally reflects the impact of personnel additions, an increase in legal expenses related to patent activity and an increase in marketing activities. Interest expense increased to \$576,000 in 1997 from \$462,000 in 1996 due to higher levels of equipment lease financing during the year.

The Company expects that research and development as well as general and administrative expenses will continue to increase as the Company starts new research projects, advances current clinical and preclinical candidates, and expands its marketing and business development activities.

The Company recorded a net loss of \$19,831,000 or \$0.82 per share in 1997 compared to a net loss of \$40,005,000 or \$2.13 per share in 1996. The lower loss per share reflects not only a lower aggregate loss but also an increase in average common shares outstanding from 18,798,000 in 1996 to 24,264,000 in 1997 due to two Common Stock offerings in August 1996 and March 1997.

Year Ended December 31, 1996 Compared with Year Ended December 31, 1995.

The Company's total revenues decreased to \$18,598,000 in 1996 from \$27,534,000 in 1995. In 1996, revenues consisted of \$12,013,000 under the Company's collaborative agreements, \$5,257,000 in investment income and \$1,328,000 in government grants and other income. Revenue from collaborative agreements consisted of \$6,289,000 from Glaxo Wellcome, \$4,196,000 from HMR, \$692,000 from Kissei, and \$836,000 from others. The research funding requirements of the Kissei HIV collaborative agreement concluded in 1995, although Kissei continues to have certain development funding obligations. In 1995, revenues consisted of \$21,587,000 under the Company's collaborative agreements, \$5,453,000 in investment income and \$494,000 in government grants and other income. Revenue from collaborative agreements consisted of \$10,053,000 from Glaxo Wellcome, \$5,370,000 from Kissei, \$3,749,000 from HMR and \$2,415,000 from others.

The Company's total costs and expenses increased to \$58,603,000 in 1996 from \$49,062,000 in 1995. The increase in total costs and expenses resulted principally from the Company's payment of \$15,000,000 to obtain a non-exclusive, world-wide license under certain Searle patent applications claiming HIV protease inhibitors. Research and development expenses declined to \$35,212,000 in 1996 from \$41,512,000 in 1995. Although the Company expanded scientific staffing and facilities in 1996, overall research and development expense decreased due to significant costs incurred in 1995 for manufacturing bulk drug substance for use in clinical trials. In addition, general and administrative expenses increased to \$7,929,000 in 1996 from \$7,069,000 in 1995. The increase in general and administrative expense principally reflects the impact of personnel additions, the Company's facilities expansion, and an increase in marketing costs principally for the Company's subsidiary Altus Biologics Inc. Interest expense decreased to \$462,000 in 1996 from \$481,000 in 1995 on higher levels of equipment lease financing due to lower blended rates of interest charged.

The Company recorded a net loss of \$40,005,000 or \$2.13 per share in 1996 compared to a net loss of \$21,528,000 or \$1.25 per share in 1995.

#### Liquidity and Capital Resources

The Company's operations have been funded principally through strategic collaborative agreements, public offerings and private placements of the Company's equity securities, equipment lease financing, government grants and investment income. The Company expects to incur increased research and development and related supporting expenses and, consequently, continued losses on a quarterly and annual basis as it continues to develop existing and future compounds and to conduct clinical trials of potential drugs. The Company also expects to incur substantial administrative and commercialization expenditures in the future and additional expenses related to the filing, prosecution, defense and enforcement of patent and other intellectual property rights.

The Company expects to finance these substantial cash needs with its existing cash and investments of approximately \$280 million at December 31, 1997, together with investment

income earned thereon, future payments under its existing collaborative agreements, and facilities and equipment financing. To the extent that funds from these sources are not sufficient to fund the Company's activities, it will be necessary to raise additional funds through public offerings or private placements of securities or other methods of financing. There can be no assurance that such financing will be available on acceptable terms, if at all. The Company believes that its existing cash and investments should be sufficient to meet its anticipated requirements for at least the next two years.

In September 1997, the Company and Kissei entered into a collaborative agreement to design inhibitors of p38 MAP kinase and to develop them as novel, orally active drugs for the treatment of inflammatory and neurological diseases. Under the terms of the agreement, Kissei will pay the Company up to \$22 million composed of a \$4 million upfront payment paid in September 1997, \$11 million of product research funding over three years and \$7 million of development and commercialization milestone payments. The Company and Kissei will collaborate to identify and evaluate compounds that target p38 MAP kinase. Kissei will have the right to develop and commercialize these compounds in its licensed territories. Kissei has exclusive rights to p38 MAP kinase compounds in Japan and certain Southeast Asian countries and semi-exclusive rights in China, Taiwan and South Korea. The Company retains exclusive marketing rights in the United States, Canada, Europe, and the rest of the world. In addition, the Company will have the right to supply bulk drug material to Kissei for sale in its territory, and will receive royalties and drug supply payments on any product sales. Kissei has the right to terminate the agreement without cause upon six months' notice after June 1998.

In June 1997, the Company and Lilly entered into a collaborative agreement to design inhibitors of the hepatitis C protease enzyme, and to develop them as novel drugs to treat hepatitis C infection. Under the terms of the agreement, Lilly will pay the Company up to \$51 million composed of a \$3 million upfront payment paid in June 1997, \$33 million of product research funding over six years and \$15 million of development and commercialization milestone payments. The Company and Lilly will jointly manage the research, development, manufacturing and marketing of drug candidates emerging from the collaboration. The Company will have primary responsibility for drug design, process development and pre-commercial drug substance manufacturing, and Lilly will have primary responsibility for formulation, preclinical and clinical development and global marketing. The Company has the option to supply 100 percent of Lilly's commercial drug substance supply needs. The Company will receive royalties on future product sales, if any. If the Company exercises its commercial supply option, the Company will receive drug supply payments in addition to royalties on future product sales, if any. Lilly has the right to terminate the agreement without cause upon six months' notice after June 1999. In connection with this collaboration, Lilly purchased 263,922 shares of the Company's common stock for \$10 million.

In March 1997, the Company completed a public offering of 3,450,000 shares of its Common Stock at \$45.50 per share raising net proceeds after commissions and expenses of \$149 million.

At December 31, 1997, the Company leased approximately 134,000 square feet of space under leases with terms ranging from 3 to 8 years. In addition, the Company's liability for capitalized equipment lease obligations and other equipment financing totaled \$8.4 million at December 31, 1997.

The Company adopted requirements relating to basic and diluted earnings per share in accordance with Statement of Financial Accounting Standards No. 128, "Earnings Per Share" as of the fourth quarter of 1997. Basic earnings per share is based upon the weighted average number of common shares outstanding during the period. Diluted earnings per 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 not anti-dilutive. Common equivalent shares result from the assumed exercise of outstanding stock options, the proceeds of which are then assumed to have been used to repurchase outstanding stock options using the treasury stock method.

The Financial Accounting Standards Board ("FASB") has issued Statement of Financial Accounting Standards No. 130 ("SFAS 130"), "Reporting Comprehensive Income". This Statement requires that total comprehensive income be reported and that changes be shown in a financial statement displayed with the same prominence as other financial statements. SFAS 130 is effective for fiscal years beginning after December 15, 1997. Reclassification of financial statements for earlier periods is required for comparative purposes. The Company does not believe that this will have a material impact on net loss.

The Company is currently assessing the potential impact of the year 2000 on the processing of date-sensitive information by the Company's computerized information systems and products purchased by the Company. The Company believes that its internal information systems are either year 2000 compliant or will be so prior to the year 2000 without incurring material costs. There can be no assurance, however, that the Company will not experience unexpected costs and delays in achieving year 2000 compliance for its internal information systems and current products, which could result in a material adverse effect on the Company's future results of operations.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by Item 8 is contained on pages F - 1 through F - 17 of this report.

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

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information regarding directors required by this Item is included in the definitive Proxy Statement for the Company's 1998 Annual Meeting of Stockholders, to be filed with the Commission on or about April 14, 1998 (the "1998 Proxy Statement"), under "Election of Directors" and is incorporated herein by reference. The information regarding executive officers required by this Item is included in Part I of this Annual Report on Form 10-K.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is included in the 1998 Proxy Statement under "Executive Compensation" and is incorporated herein by reference (excluding, however, the "Report on Executive Compensation" and the Performance Graph contained in the 1998 Proxy Statement, which shall not be deemed incorporated herein).

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is included in the 1998 Proxy Statement under "Security Ownership of Certain Beneficial Owners and Management" and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Not applicable.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(a)(1) Financial Statements. The Financial Statements required to be filed by Item 8 of this Annual Report on Form 10-K, and filed herewith, are as follows:

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this Form 10-K  
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(a)(2) Financial Statement Schedules.

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.

(a)(3) Exhibits.

Exhibit Number -----	Exhibit Description -----
3.1	Restated Articles of Organization filed with the Commonwealth of Massachusetts on July 31, 1991 (filed herewith).
3.2	Articles of Amendment filed with the Commonwealth of Massachusetts on June 4, 1997 (filed herewith).
3.3	Certificate of Vote of Directors Establishing a Series of a Class of Stock, as filed with the Secretary of the Commonwealth of Massachusetts on July 31, 1991 (filed herewith).
3.4	By-laws of the Company (filed as Exhibit 3.2 to the Company's Registration Statement on Form S-1 (Registration No. 33-43874) and incorporated herein by reference).

- 4.1 Specimen stock certificate (filed as Exhibit 4.1 to the Company's Registration Statement on Form S-1 (Registration No. 33-40966) or amendments thereto and incorporated herein by reference).
- 4.2 Stockholder Rights Plan (filed as Exhibit 4.2 to the Company's Registration Statement on Form S-1 (Registration No. 33-40966) or amendments thereto and incorporated herein by reference).
- 4.3 First Amendment to Rights Agreement dated as of February 21, 1997 (filed as Exhibit 4.3 to the Company's 1996 Annual Report on Form 10-K (File No. 0-19319) and incorporated herein by reference).
- 10.1 1991 Stock Option Plan, as amended and restated as of May 13, 1993 (filed as Exhibit 28.1 to the Company's Registration Statement on Form S-8 (No. 33-65742) and incorporated herein by reference).\*
- 10.2 1994 Stock and Option Plan (filed as Exhibit 10.2 to the Company's 1994 Annual Report on Form 10-K (File No. 0-19319) and incorporated herein by reference).\*
- 10.3 1996 Stock and Option Plan (filed as Exhibit 10.3 to the Company's 1996 Annual Report on Form 10-K (File No. 0-19319) and incorporated herein by reference).\*
- 10.4 Amendment to 1996 Stock and Option Plan adopted December 12, 1997 (filed herewith).\*
- 10.5 Non-Competition and Stock Repurchase Agreement between the Company and Joshua Boger, dated April 20, 1989 (filed as Exhibit 10.2 to the Company's Registration Statement on Form S-1 (Registration No. 33-40966) or amendments thereto and incorporated herein by reference).\*
- 10.6 Form of Employee Stock Purchase Agreement (filed as Exhibit 10.3 to the Company's Registration Statement on Form S-1 (Registration No. 33-40966) or amendments thereto and incorporated herein by reference).\*
- 10.7 Form of Employee Non-Disclosure and Inventions Agreement (filed as Exhibit 10.4 to the Company's Registration Statement on Form S-1 (Registration No. 33-40966) or amendments thereto and incorporated herein by reference).
- 10.8 Form of Executive Employment Agreement executed by Richard H. Aldrich, Joshua S. Boger, and Vicki L. Sato (filed as Exhibit 10.6 to the Company's 1994 Annual Report on Form 10-K (File No. 0-19319) and incorporated herein by reference).\*
- 10.9 Form of Amendment to Employment Agreement executed by Richard H. Aldrich, Joshua S. Boger and Vicki L. Sato (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 1995 (File No. 0-19319) and incorporated herein by reference).
- 10.10 Series C Convertible Preferred Stock Purchase Agreement between the Company and the party named therein, dated September 21, 1990 (filed as Exhibit 10.8 to the Company's Registration Statement on Form S-1 (Registration No. 33-40966) or amendments thereto and incorporated herein by reference).
- 10.11 Stock Purchase Agreement dated November 10, 1994 between the Company and

Biotech Target S.A. (filed as Exhibit 10.12 to the Company's 1994 Annual Report on Form 10-K (File No. 0-19319) and incorporated herein by reference).

- 10.12 Lease dated October 1, 1992 between C. Vincent Vappi and the Company relating to the premises at 40 Allston Street, 618 Putnam Street, 228 Sidney Street, and 240 Sidney Street (filed as Exhibit 10.14 to the Company's Annual Report on Form 10-K for the year ended December 31, 1992 (File No. 0-19319) and incorporated herein by reference).
- 10.13 First Amendment as of March 1, 1995 to the lease between C. Vincent Vappi and the Company (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 1995 (File No. 0-19319) and incorporated herein by reference).
- 10.14 Second Amendment as of February 12, 1997 to Lease between C. Vincent Vappi and the Company (filed as Exhibit 10.14 to the Company's Annual Report on Form 10-K for the year ended December 31, 1996 (File No. 0-19319) and incorporated herein by reference ).
- 10.15 Lease dated March 1, 1993, between Fort Washington Realty Trust and the Company, relating to the premises at 625 Putnam Avenue, Cambridge, MA (filed as Exhibit 10.10 to the Company's Annual Report on Form 10-K for the year ended December 31, 1993 (File No. 0-19319) and incorporated herein by reference).
- 10.16 First Amendment, dated 1 December 1996, to Lease between Fort Washington Realty Trust and the Company dated 1 March 1993 (filed as Exhibit 10.16 to the Company's Annual Report on Form 10-K for the year ended December 31, 1996 (File No. 0-19319) and incorporated herein by reference).
- 10.17 Second Amendment, dated 1 February 1998, to Lease between Fort Washington Realty Trust and the Company dated 1 March 1993 (filed herewith).
- 10.18 Lease dated March 3, 1995, between Fort Washington Realty Trust and the Company, relating to the premises at 130 Waverly Street, Cambridge, MA (filed as Exhibit 10.15 to the Company's 1994 Annual Report on Form 10-K (File No. 0-19319) and incorporated herein by reference).
- 10.19 First Amendment to Lease dated March 3, 1995 between Fort Washington Realty Trust and the Company (filed as Exhibit 10.15 to the Company's 1995 Annual Report on Form 10-K (File No. 0-19319) and incorporated herein by reference).
- 10.20 Second Amendment to Lease and Option Agreement dated June 12, 1997 between Fort Washington Realty Trust and the Company (filed herewith).
- 10.21 Research and Development Agreement dated April 13, 1993 between the Company and Kissei Pharmaceutical Co., Ltd. (with certain confidential information deleted) (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 1993 (File No. 0-19319) and incorporated herein by reference).
- 10.22 Research, Development, and License Agreement dated September 8, 1993 between the Company and Rousset Uclaf (with certain confidential information deleted) (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993 (File No. 0-19319) and incorporated herein by reference).



- 10.23 Research Agreement and License Agreement, both dated December 16, 1993, between the Company and Burroughs Wellcome Co. (with certain confidential information deleted) (filed as Exhibit 10.16 to the Company's Annual Report on Form 10-K for the year ended December 31, 1993 (File No. 0-19319) and incorporated herein by reference).
- 10.24 License Agreement and Supply Agreement, both dated May 9, 1996, between the Company and BioChem Pharma (International) Inc. (with certain confidential information deleted) (filed as Exhibit 10.1 to the Company's Quarterly Report on 10-Q for the quarter ended March 31, 1996 (File No. 0-19319) and incorporated herein by reference).
- 10.25 Research and Development Agreement between the Company and Eli Lilly and Company effective June 11, 1997 (filed with certain confidential information deleted as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 1997, and incorporated herein by reference).
- 10.26 Research and Development Agreement between the Company and Kissei Pharmaceutical Co. Ltd. effective September 10, 1997 (filed, with certain confidential information deleted, as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 1997, and incorporated herein by reference).
- 21 Subsidiaries of the Company (filed herewith).
- 23 Consent of Independent Accountants (filed herewith).
- 27 Financial Data Schedule (submitted as an exhibit only in the electronic format of this Annual Report on Form 10-K submitted to the Securities and Exchange Commission).

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\* Compensatory plan or agreement applicable to management and employees.

(b) Reports on Form 8-K. No reports on Form 8-K were filed by the Company during the quarter ended December 31, 1997.



/s/ Elaine S. Ullian

Director

March 16, 1998

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Elaine S. Ullian

VERTEX PHARMACEUTICALS INCORPORATED  
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Report of Independent Accountants

To 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, 1997 and 1996, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 1997. 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 generally accepted auditing standards. 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 as of December 31, 1997 and 1996, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 1997, in conformity with generally accepted accounting principles.

Coopers & Lybrand L.L.P.

Boston, Massachusetts  
February 23, 1998

Consolidated Balance Sheets  
Vertex Pharmaceuticals Incorporated

(Dollars in thousands)	December 31,	
	1997	1996
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$71,454	\$34,851
Investments	208,217	95,508
Prepaid expenses and other current assets	1,952	1,791
<b>Total current assets</b>	<b>281,623</b>	<b>132,150</b>
Restricted cash	2,316	2,316
Property and equipment, net	11,095	8,663
Other assets	570	370
<b>Total assets</b>	<b>\$295,604</b>	<b>\$143,499</b>
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Obligations under capital lease and debt	\$2,510	\$2,910
Accounts payable	4,247	1,391
Accrued expenses	6,385	2,755
Deferred revenue	556	--
<b>Total current liabilities</b>	<b>13,698</b>	<b>7,056</b>
Obligations under capital lease and debt, excluding current portion	5,905	5,617
<b>Total liabilities</b>	<b>19,603</b>	<b>12,673</b>
<b>Commitments (Note G)</b>		
<b>Stockholders' equity:</b>		
Preferred stock, \$.01 par value; 1,000,000 shares authorized; none issued		
Common stock, \$.01 par value; 100,000,000 shares authorized; 25,215,617 and 21,097,117 shares issued and outstanding in 1997 and 1996, respectively	252	211
Additional paid-in capital	392,372	227,510
Equity adjustments	152	49
Accumulated deficit	(116,775)	(96,944)
<b>Total stockholders' equity</b>	<b>276,001</b>	<b>130,826</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$295,604</b>	<b>\$143,499</b>

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

Consolidated Statements of Operations  
Vertex Pharmaceuticals Incorporated

(In thousands, except per share data)	Year Ended December 31,		
	1997	1996	1995
<b>Revenues:</b>			
Collaborative and other research and development	\$29,926	\$13,341	\$ 22,081
Investment income	13,873	5,257	5,453
<b>Total revenues</b>	<b>43,799</b>	<b>18,598</b>	<b>27,534</b>
<b>Costs and expenses:</b>			
Research and development	51,624	35,212	41,512
General and administrative	11,430	7,929	7,069
License payment	--	15,000	--
Interest	576	462	481
<b>Total costs and expenses</b>	<b>63,630</b>	<b>58,603</b>	<b>49,062</b>
<b>Net loss</b>	<b>\$(19,831)</b>	<b>\$(40,005)</b>	<b>\$(21,528)</b>
<b>Basic and diluted loss per common share</b>			
<b>Basic and diluted weighted average number of common shares outstanding</b>	<b>24,264</b>	<b>18,798</b>	<b>17,231</b>

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

Consolidated Statements of Stockholders' Equity  
Vertex Pharmaceuticals Incorporated

(In thousands)	Common Stock		Paid-In Capital	Additional Equity Adjustments	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance, December 31, 1994	17,189	\$172	\$140,920	\$ (203)	\$(35,411)	\$105,478
Issuances of common stock:						
Benefit plans	93	1	1,118			1,119
Warrant exercise	17					
Net change in unrealized holding gains/ losses on investments				203		203
Net loss					(21,528)	(21,528)
Balance, December 31, 1995	17,299	173	142,038	--	(56,939)	85,272
Issuances of common stock:						
Public offering of common stock	3,450	34	77,481			77,515
Private placement of common stock	152	2	4,998			5,000
Benefit plans	196	2	2,993			2,995
Net change in unrealized holding gains/ losses on investments				35		35
Translation adjustments				14		14
Net loss					(40,005)	(40,005)
Balance, December 31, 1996	21,097	211	227,510	49	(96,944)	130,826
Issuances of common stock:						
Public offering of common stock	3,450	34	148,776			148,810
Private placement of common stock	264	3	9,997			10,000
Benefit plans	405	4	6,089			6,093
Net change in unrealized holding gains/ losses on investments				115		115
Translation adjustments				(12)		(12)
Net loss					(19,831)	(19,831)
Balance, December 31, 1997	25,216	\$252	\$392,372	\$ 152	\$(116,775)	\$276,001

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



Consolidated Statements of Cash Flows  
Vertex Pharmaceuticals Incorporated

(In thousands)	Year Ended December 31,		
	1997	1996	1995
<b>Cash flows from operating activities:</b>			
Net loss	\$(19,831)	\$(40,005)	\$(21,528)
Adjustment to reconcile net loss to net cash used by operating activities:			
Depreciation and amortization	3,588	3,160	3,710
Changes in assets and liabilities:			
Prepaid expenses and other current assets	(161)	(832)	(549)
Accounts payable	2,856	(1,631)	1,624
Accrued expenses	3,630	(748)	1,231
Deferred revenue	556	(197)	(438)
Net cash provided (used) by operating activities	(9,362)	(40,253)	(15,950)
<b>Cash flows from investing activities:</b>			
Purchases of investments	(303,599)	(73,035)	(61,862)
Sales and maturities of investments	191,005	36,150	38,304
Deposit to collateralize letter of credit	--	--	(2,316)
Expenditures for property and equipment	(6,020)	(3,983)	(3,078)
Other assets	(200)	518	(65)
Net cash provided (used) by investing activities	(118,814)	(40,350)	(29,017)
<b>Cash flows from financing activities:</b>			
Repayment of capital lease obligations and debt	(3,104)	(2,187)	(1,790)
Proceeds from equipment sale/leaseback	1,179	3,727	2,385
Proceeds from debt	1,813	--	--
Proceeds from public offerings of common stock	148,810	77,515	--
Proceeds from private placement of common stock	10,000	5,000	--
Proceeds from other issuances of capital stock	6,093	2,995	1,119
Net cash provided (used) by financing activities	164,791	87,050	1,714
Effect of exchange rates on cash	(12)	14	--
Increase (decrease) in cash and cash equivalents	36,603	6,461	(43,253)
Cash and cash equivalents at beginning of year	34,851	28,390	71,643
Cash and cash equivalents at end of year	\$71,454	\$34,851	\$28,390

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

A. The Company

Vertex Pharmaceuticals Incorporated ("Vertex" or the "Company") uses a range of drug discovery technologies to identify, design and develop novel, orally deliverable compounds that have the potential to treat major human diseases. To date, the Company has not received any revenues from the sale of pharmaceutical products. The Company's revenues during 1997, 1996 and 1995 principally resulted from research support payments from corporate partners. The Company expects to incur significant operating losses over the next several years as a result of expenditures for its research and development programs.

The consolidated financial statements include the accounts of the Company and its subsidiaries: Altus Biologics Inc., Vertex Securities Corp. and Vertex Pharmaceuticals (Europe) Limited. All material intercompany transactions are eliminated. The Company sold its majority interest in Versal Technologies, Inc. at net book value during 1997 and currently accounts for its remaining 19% ownership under the cost method.

The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, development by the Company or its competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, technological and clinical trial uncertainty, dependence on collaborative partners, share price volatility, the need to obtain additional funding, reliance on pharmaceutical pricing and reimbursement, uncertainties regarding manufacturing and sales and marketing, product liability and compliance with government regulations.

B. Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles 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 financial statements and the reported amounts of revenues and expenses during the reported period. Actual results could differ from those estimates.

Cash and Cash Equivalents

Cash equivalents, which are money market funds and debt securities, are valued at cost plus accrued interest. The Company considers all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents. Changes in cash and cash equivalents may be affected by shifts in investment portfolio maturities as well as by actual cash receipts and disbursements. Financial instruments which potentially subject the Company to concentration of credit risk consist principally of money market funds and marketable securities. The Company places these investments in 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 losses in such accounts and does not believe it is exposed to any significant credit risk on these funds.

Investments

Investments consist of marketable securities which are classified as available-for-sale. Investments

are stated at fair value with unrealized gains and losses included as a component of stockholders' equity until realized. The fair value of these securities is based on quoted market prices. Realized gains and losses are determined on the specific identification method and are included in investment income.

#### Property and Equipment

Property and equipment are recorded at cost. Depreciation and amortization are provided using the straight-line method over the lesser of the lease terms or the estimated useful lives of the related assets, generally four or five years for equipment and furniture and three years for purchased software. 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 income.

#### Revenue Recognition

Revenue under research and development arrangements is recognized as earned under the terms of the respective agreements. License payments are recorded when received and the license agreements are signed. Product research funding is recorded as revenue, generally on a quarterly basis, as research effort is incurred. Deferred revenue arises from payments received which have not yet been earned under research and development arrangements. The Company recognizes milestone payments when the milestones are achieved.

#### Research and Development

All research and development costs are expensed as incurred.

#### Income Taxes

The Company provides for federal and state taxes on pretax income at applicable rates in accordance with Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes." Potential future income tax benefits resulting from net operating losses and unused research and experimentation tax credits are available to offset future income.

#### Basic and Diluted Loss per Common Share

The Company adopted requirements relating to basic and diluted earnings per share in accordance with Statement of Financial Accounting Standards No. 128, "Earnings Per Share" as of the fourth quarter of 1997. Basic earnings per share is based upon the weighted average number of common shares outstanding during the period. Diluted earnings per 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 not anti-dilutive. Common equivalent shares result from the assumed exercise of outstanding stock options, the proceeds of which are then assumed to have been used to repurchase outstanding stock options using the treasury stock method. Common equivalent shares have not been included in the per-share calculations as the effect would be anti-dilutive. Total potential common equivalent shares consist of 4,702,000 stock options outstanding which has a weighted average exercise price of \$22.03 as of December 31, 1997.

#### Recently Issued Accounting Pronouncements

The FASB has recently issued Statement of Financial Accounting Standards No. 130 ("SFAS 130"), "Reporting Comprehensive Income". This Statement requires that total comprehensive income be reported and that changes be shown in a financial statement displayed with the same prominence as other financial statements. SFAS 130 is effective for fiscal years beginning after December 15, 1997. Reclassification of financial statements for earlier periods is required for

comparative purposes. The Company does not believe that this will have a material impact on net loss.

C. Investments

Investments consist of the following at December 31 (in thousands):

	1997		1996	
	Cost	Fair Value	Cost	Fair Value
Cash and cash equivalents				
Cash and money market funds	\$43,072	\$43,072	\$21,253	\$21,253
Corporate debt securities	28,382	28,382	13,598	13,598
Total cash and cash equivalents	\$71,454	\$71,454	\$34,851	\$34,851
Investments				
US Government securities				
Due within 1 year	\$4,719	\$4,713	\$7,555	\$7,568
Due within 1 to 5 years	40,167	40,200	--	--
Corporate debt securities				
Due within 1 year	71,136	71,165	64,140	64,155
Due within 1 to 5 years	69,771	69,851	23,780	23,785
Due over 5 years	22,276	22,288	--	--
Total Investments	\$208,069	\$208,217	\$95,475	\$95,508

Gross unrealized holding gains and losses at December 31, 1997 were \$184,000 and \$36,000, respectively, and at December 31, 1996 were \$89,000 and \$56,000, respectively. The effect of gross realized gains and losses on the financial statements for the years 1997, 1996 and 1995 was immaterial. Maturities stated are final maturities, the effective maturities for certain securities may be shorter in duration.

D. Restricted Cash

On March 16, 1995, the Company signed a ten-year operating lease for additional facilities occupied in 1996. In accordance with the lease agreement, the Company was required to deposit approximately \$2,316,000 with its bank to collateralize a conditional, stand-by letter of credit in the name of the landlord. The letter of credit is redeemable only if the Company defaults on the lease under specific criteria. These funds are restricted from the Company's use during the lease period, although the Company is entitled to all interest earned on the funds.

E. Property and Equipment

Property and equipment consist of the following at December 31 (in thousands):

	1997	1996
Leasehold improvements	\$6,983	\$4,719
Furniture and equipment	4,511	2,260
Purchased software	2,823	2,418
Equipment under capital lease	20,403	19,303
	34,720	28,700
Less accumulated depreciation and amortization	23,625	20,037
	\$11,095	\$8,663

The net book value of equipment under capital lease was \$5,811,000 and \$7,366,000 at December

31, 1997 and 1996, respectively.

F. Accrued Expenses

Accrued expenses consist of the following at December 31 (in thousands):

	1997	1996
	-----	-----
Professional fees	\$1,192	\$1,196
Development contract costs	2,663	317
Payroll and benefits	1,145	567
Other	1,385	675
	-----	-----
	\$6,385	\$2,755
	-----	-----

G. Commitments, Capital Leases and Debt Obligations

Capital Leases and Debt Obligations

At December 31, 1997, long-term capital lease and debt obligations were due as follows (in thousands):

Year ended December 31,	Capital leases	Debt	Total
-----	-----	-----	-----
1998	\$2,623	\$276	\$2,899
1999	2,034	300	2,334
2000	1,434	327	1,761
2001	1,294	355	1,649
2002	88	531	619
	-----	-----	-----
Total	7,473	1,789	9,262
	-----	-----	-----
Less amount representing interest payments	847	--	847
	-----	-----	-----
Present value of minimum lease and debt payments	6,626	1,789	8,415
Less current portion	2,234	276	2,510
	-----	-----	-----
	\$4,392	\$1,513	\$5,905
	-----	-----	-----

During 1997 and 1996, the Company financed under capital lease arrangements an aggregate of \$1,179,000 and \$3,727,000, respectively, of asset cost under its master lease agreements. At the end of the lease term, the Company has the right to either return the equipment to the lessor or purchase the equipment for fair market value at that time. These agreements have a term of four or five years, and require that the Company maintain a certain level of cash and investments.

Also during 1997, the Company financed under a master debt agreement, asset cost of \$676,000 and \$1,137,000 with interest rates of 8.59% and 8.38%, respectively. The Company has certain equipment designated as collateral under these agreements. These agreements have a term of five years, and require that the Company maintain a certain level of cash and investments.

Interest paid under capital leases and debt was \$576,000 and \$462,000 in 1997 and 1996, respectively. At December 31, 1997, the Company had availability under its 1997 master debt agreement to finance up to an additional \$2,187,000 of equipment.

Commitments

The Company leases its facilities and certain equipment under operating leases. The Company's leases have terms through the year 2005. Noncancelable future minimum payments are as follows: \$3,742,000 in 1998, \$3,499,000 in 1999, and \$3,326,000 in 2000, \$2,786,000 in 2001 and \$2,450,000 in 2002, and \$6,515,000 thereafter. Rental expense was \$3,363,000, \$3,063,000

and \$1,281,000 in 1997, 1996 and 1995, respectively.

The Company has certain license and maintenance contracts that contain future, committed payments for the support and upgrade of specific software programs currently used in research. For the years 1998, 1999, 2000 and 2001 these amounts are \$210,000, \$314,000, \$343,000 and \$349,000, respectively.

H. Income Taxes

The Company's federal statutory income tax rate for 1997, 1996 and 1995 was 34%. The Company recorded no income tax benefit for 1997, 1996 and 1995 and recorded a full valuation allowance against net operating losses due to uncertainties related to realizability of these tax assets.

Deferred tax liabilities and assets 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 (in thousands):

	1997	1996
	-----	-----
Net operating loss	\$38,434	\$30,567
Tax credits carryforward	5,829	4,089
Property, plant and equipment	1,211	1,253
Other	468	526
	-----	-----
Gross deferred tax asset	45,942	36,435
Valuation allowance	(45,942)	(36,435)
	-----	-----
Net deferred tax balance	\$ --	\$ --
	-----	-----

For federal income tax purposes, as of December 31, 1997, the Company has regular tax net operating loss carryforwards of approximately \$113,040,000 and \$5,829,000 of tax credits, which may be used to offset future income. These net operating loss carryforwards expire beginning in 2005, and the tax credit carryforwards begin to expire in 2004.

The amount of tax credits and net operating loss carryforwards that the Company may utilize in any one year is limited in accordance with Internal Revenue Code Section 382. This limitation arises whenever a cumulative change in ownership in excess of 50% occurs. A change of ownership has occurred which will limit the amount of net operating loss and tax credits available prior to the change. There may also be further changes of ownership subsequent to 1997 which may also limit the amount of net operating loss and tax credit utilization in a subsequent year.

I. Common and Preferred Stock

Common Stock

In June 1997, Eli Lilly and Company ("Lilly") purchased 263,922 shares of the Company's common stock for \$10,000,000. In March 1997, the Company completed a public offering of 3,450,000 shares of its common stock at a price of \$45.50 per share with net proceeds to the Company of approximately \$148,810,000. In August 1996, the Company completed a public

offering of 3,450,000 shares of its Common Stock at a price of \$24 per share with net proceeds to the Company of approximately \$77,515,000. In June 1996, Glaxo Wellcome purchased 151,792 shares of the Company's Common Stock for approximately \$5,000,000.

During 1997, the Company increased the authorized number of shares of Common Stock by 50,000,000 shares to 100,000,000 shares. At December 31, 1997, 6,690,318 shares of the Company's Common Stock were reserved for exercise of Common Stock options granted or to be granted under its 1991 Stock Option Plan, 1994 Stock and Option Plan, and 1996 Stock and Option Plan, 47,999 shares were reserved for exercise of certain other options granted in 1991, 114,219 shares of Common Stock were reserved for issuance under the Company's 401(k) Plan, and 113,898 shares of Common Stock were reserved for issuance under the Company's Employee Stock Purchase Plan.

#### Stock Option Plans

The Company applies APB Opinion No. 25 and related interpretations in accounting for its stock-based compensation plans. However, pro forma disclosures as if the Company adopted the cost recognition requirements under FASB Statement No. 123 "Accounting for Stock-Based Compensation" ("SFAS 123") in 1997, 1996 and 1995 are presented below. Compensation expense of \$66,000 was recognized during 1997. No compensation expense was recognized for these plans in 1996 and 1995.

The Company has reserved 4,000,000 shares under its 1991 Stock Option Plan (the "1991 Plan") and 1994 Stock and Option Plan (the "1994 Plan"). The Company's 1996 Stock and Option Plan (the "1996 Plan"; together with the 1991 Plan and the 1994 Plan, the "Plans") reserved an additional 3,250,000 shares, of which 1,250,000 shares were reserved during 1997. Under the 1994 Plan and the 1996 Plan, stock rights, which are either (i) incentive stock options, (ii) non-qualified stock options ("NQSOs"), or (iii) award shares of Common Stock or the opportunity to make a direct purchase of shares of Common Stock ("Stock Awards"), may be granted to employees (including officers and directors who are employees), consultants, advisors and non-employee directors (NQSOs and stock awards only), either as options intended to qualify as "incentive stock options" under the Internal Revenue Code or as non-qualified stock options. Incentive stock options granted under the Plans may not be granted at a price less than the fair market value of the Common Stock on the date of grant. Non-qualified stock options may be granted at an exercise price established by the Compensation Committee of the Board of Directors, which may be less than, equal to or greater than the fair value of the Common Stock on the date of grant. Vesting periods, generally four or five years, are determined by the Compensation Committee. Incentive stock options granted under the Plans must expire not more than ten years from the date of grant.

Stock option activity for the years ended December 31, 1997, 1996 and 1995 is as follows (shares in thousands):

	1997		1996		1995	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Outstanding at beginning of year	4,033	\$18.98	3,196	\$14.63	2,523	\$13.13
Granted	1,257	\$29.78	1,056	\$31.11	829	\$18.77
Exercised	(375)	\$13.97	(139)	\$12.96	(42)	\$11.48
Canceled	(213)	\$23.99	(80)	\$16.11	(114)	\$12.51
	-----		-----		-----	
Outstanding at end of year	4,702	\$22.03	4,033	\$18.98	3,196	\$14.63
	-----		-----		-----	
Options exercisable at year-end	1,944	\$16.50	1,625	\$13.92	1,152	\$12.99
	-----		-----		-----	
Weighted average fair value of options granted during the year	\$13.94		\$15.04		\$9.05	
	-----		-----		-----	

The fair value of each option granted during 1997, 1996 and 1995 was estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted average assumptions: (1) expected life of 5.18 years for the 1997 grants and 5.41 years for the 1996 and 1995 grants (2) expected volatility of 44.7% for the 1997 grants and 42% for the 1996 and 1995 grants (3) risk-free interest rate of 5.5% for the 1997 grants and 6.30% for the 1996 and 1995 grants and (4) no dividend yield.

The following table summarizes information about stock options outstanding and exercisable at December 31, 1997 (shares in thousands):

Range of exercise prices	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
\$ 6.48 - \$13.63	1,069	5.89	\$11.58	824	\$11.41
\$13.75 - \$19.00	1,416	6.89	\$17.09	858	\$16.57
\$19.50 - \$27.34	976	9.84	\$27.07	22	\$24.12
\$27.38 - \$33.06	945	8.99	\$30.99	179	\$31.01
\$33.19 - \$49.13	296	9.41	\$38.12	61	\$38.80
	---			-----	
\$ 6.48 - \$49.13	4,702	7.85	\$22.03	1,944	\$16.50
	-----			-----	



## Employee Stock Purchase Plan

Under the Company's Employee Stock Purchase Plan, substantially all permanent employees may, through payroll withholdings, purchase shares of the Company's Common Stock at a price of 85% of the lesser of fair market value at the beginning or end of each six-month withholding period. During 1997, 26,213 shares were issued at an average price of \$28.00 per share. During 1996, 32,296 shares of Common Stock at an average price of \$19.21 per share were issued to employees under the plan. During 1995, 42,445 shares of Common Stock at a price of \$11.26 per share were issued to employees under the plan. Had the Company adopted SFAS 123, the weighted average fair value of each purchase right granted during 1997, 1996 and 1995 would have been \$9.16, \$5.76 and \$3.25, respectively. The fair value was estimated at the beginning of the withholding period using the Black-Scholes option-pricing model with the following weighted average assumptions: (1) expected life of one half year for all years (2) expected volatility of 51%, 41% and 35% for 1997, 1996 and 1995 respectively (3) risk-free interest rate of 5.43% for 1997, 5.50% for 1996 and 1995 and (4) no dividend yield.

## Pro forma Disclosures

Had compensation cost for the Company's 1997, 1996 and 1995 grants for stock-based compensation plans been determined consistent with SFAS 123, the Company's net loss and net loss per share for 1997, 1996 and 1995 would approximate the pro forma amounts below (in thousands except per share data):

		1997	1996	1995
		----	----	----
Net loss	As reported	\$(19,831)	\$(40,005)	\$(21,528)
	Pro forma	\$(25,154)	\$(42,025)	\$(21,750)
Basic and diluted loss per share	As reported	\$ (0.82)	\$(2.13)	\$(1.25)
	Pro forma	\$ (1.04)	\$(2.24)	\$(1.26)

The effects of applying SFAS 123 in this pro forma disclosure are not indicative of future amounts since SFAS 123 does not apply to awards prior to 1995 and additional awards in future years are anticipated.

## Warrants

During 1995, all remaining warrants, originally issued in connection with equipment lease financing transactions, were exercised in non-cash, net exercise transactions to acquire an aggregate of 16,801 shares of Common Stock.

## Rights

Each holder of a share of outstanding Common Stock also holds one share purchase right (a "Right") for each share of Common Stock. Each Right entitles the holder to purchase from the Company one one-hundredth of a share of Series A junior participating preferred stock, \$.01 par value (the "Junior Preferred Shares"), of the Company at a price of \$270 per one one-hundredth of a Junior Preferred Share (the "Purchase Price"). The Rights are not exercisable until the earlier of acquisition by a person or group of 15% or more of the outstanding Common Stock (an "Acquiring Person") or the announcement of an intention to make or commencement of a tender offer or exchange offer the consummation of which would result in the beneficial ownership by a person or group of 15% or more of the outstanding Common Stock. In the event that any person or group becomes an Acquiring Person, each holder of a Right other than the Acquiring Person will thereafter have the right to receive upon exercise that number of shares of Common Stock

having a market value of two times the Purchase Price and, in the event that the Company is acquired in a business combination transaction or 50% or more of its assets are sold, each holder of a Right will thereafter have the right to receive upon exercise that number of shares of Common Stock of the acquiring company which at the time of the transaction will have a market value of two times the Purchase Price. Under certain specified circumstances, the Board of Directors of the Company may cause the Rights (other than Rights owned by such person or group) to be exchanged, in whole or in part, for Common Stock or Junior Preferred Shares, at an exchange rate of one share of Common Stock per Right or one one-hundredth of a Junior Preferred Share per Right. At any time prior to the acquisition by a person or group of beneficial ownership of 15% or more of the outstanding Common Stock, the Board of Directors of the Company may redeem the Rights in whole at a price of \$.01 per Right.

#### J. Collaborative Research and Development Agreements

The Company and Kissei Pharmaceutical Co., Ltd. ("Kissei") are collaborating to design inhibitors of p38 MAP kinase and to develop them as novel, orally active drugs for the treatment of inflammatory and neurological diseases. Under the terms of the agreement, Kissei will pay the Company up to \$22 million composed of a \$4 million license payment, \$11 million of product research funding over three years and \$7 million of development and commercialization milestone payments. From the inception of the agreement in September 1997 through December 31, 1997, \$5,500,000, including a \$4,000,000 license payment in September 1997, has been recognized as revenue. The Company and Kissei will collaborate to identify and evaluate compounds that target p38 MAP kinase. Kissei will have the right to develop and commercialize these compounds in its licensed territories. Kissei has exclusive rights to p38 MAP kinase compounds in Japan and certain Southeast Asian countries and semi-exclusive rights in China, Taiwan and South Korea. The Company retains exclusive marketing rights in the United States, Canada, Europe, and the rest of the world. In addition, the Company will have the right to supply bulk drug material to Kissei for sale in its territory, and will receive royalties and drug supply payments on future product sales, if any. Kissei has the right to terminate the agreement without cause upon six months' notice after June 1998. Revenues earned from Kissei under the MAP kinase agreement were \$5,500,000 in 1997.

The Company and Lilly are collaborating on designing inhibitors of the hepatitis C protease enzyme and to develop them as novel drugs to treat hepatitis C infection. Under the terms of the agreement, Lilly will pay the Company up to \$51 million composed of a \$3 million up-front payment paid in June 1997, \$33 million of product research funding over six years and \$15 million of development and commercialization milestone payments. From the inception of the agreement in June 1997 through December 31, 1997, \$5,694,000, including a \$3,000,000 up-front payment, has been recognized as revenue. The Company and Lilly will jointly manage the research, development, manufacturing and marketing of drug candidates emerging from the collaboration. The Company will have primary responsibility for drug design, process development and pre-commercial drug substance manufacturing, and Lilly will have primary responsibility for formulation, preclinical and clinical development and global marketing. The Company has the option to supply 100 percent of Lilly's commercial drug substance supply needs. The Company will receive royalties on future product sales, if any. If the Company exercises its commercial supply option, the Company will receive drug supply payments in addition to royalties on future product sales, if any. Lilly has the right to terminate the agreement without cause upon six months' notice after June 1999. In connection with this collaboration, Lilly purchased 263,922 shares of the Company's common stock for \$10,000,000. Revenues earned from Lilly were \$5,694,000 in 1997.

The Company and BioChem Therapeutic Inc. ("BioChem") are collaborating on the development and commercialization in Canada of Incel(TM) (VX-710), Vertex's lead multidrug resistance reversal agent. Under the development agreement, BioChem is obligated to pay Vertex up to \$4,000,000

comprised of an initial licensing fee of \$500,000 and development and commercialization milestone payments. From the inception of the agreement in May 1996 through the year ended December 31, 1997, \$750,000 has been recognized as license and research revenue. BioChem will fund development of Incel in Canada, including Phase II clinical trials in two different cancer indications currently underway. Vertex will supply BioChem's clinical and commercial drug supply needs. In 1996, the Company also received additional revenues related to the sale of clinical trial material to BioChem. BioChem will pay Vertex a portion of its net sales, which will cover Vertex's cost of supplying material and will provide a profit to Vertex. BioChem has the right to terminate the agreement without cause upon six months' notice. Termination will relieve BioChem of any further payment obligations and will end any license granted to BioChem by Vertex under the agreement. Revenues earned from BioChem were \$251,000 and \$577,000 in 1997 and 1996, respectively.

In October 1995, the Company and Alpha Therapeutic Corporation ("Alpha") entered into an agreement to collaborate on the development and commercialization of VX-366 for the treatment of sickle cell disease and beta thalassemia. From the inception of the agreement in October 1995 through August, 1997, \$500,000 has been recognized as revenue. During 1997 and 1996 the Company received additional revenues related to the sale of clinical trial material to Alpha. Revenues earned from Alpha were \$13,000, \$225,000 and \$500,000 in 1997, 1996 and 1995, respectively. In August 1997, the Company and Alpha terminated this agreement.

The Company and Glaxo Wellcome plc ("Glaxo Wellcome") are collaborating on the development of compounds in connection with the Company's HIV Program. Under the collaborative agreement, Glaxo Wellcome agreed to pay the Company up to \$42,000,000 comprised of a \$15,000,000 initial license payment paid in 1993, \$14,000,000 of product research funding over five years and \$13,000,000 of development and commercialization milestone payments. From the inception of the agreement in December 1993 through the year ended December 31, 1997, \$28,000,000 has been recognized as revenue. Glaxo Wellcome is also obligated to pay to the Company additional development and commercialization milestone payments for subsequent drug candidates. In addition, Glaxo Wellcome agreed to bear all costs of development in its territory of drug candidates under the collaboration. In 1996 and 1995, the Company received additional revenue related to reimbursements for clinical development. Under the agreement, Glaxo Wellcome is also required to pay Vertex a royalty on sales. Glaxo Wellcome has the right to terminate the research collaboration without cause upon twelve months' notice given at any time and has the right to terminate the license arrangements without cause upon twelve months' notice given at any time provided such notice is not given before the research collaboration has been terminated. Termination by Glaxo Wellcome of the research collaboration will relieve Glaxo Wellcome of its obligation to make further research support payments under the agreement. Termination by Glaxo Wellcome of the license arrangements under the agreement will relieve it of its obligation to make further commercialization and development milestone and royalty payments and will end any license granted to Glaxo Wellcome by Vertex thereunder. Revenues earned from Glaxo Wellcome were \$3,275,000, \$6,289,000 and \$10,053,000 for 1997, 1996 and 1995. In June 1996, the Company and Glaxo Wellcome obtained a worldwide, non-exclusive license under certain G.D. Searle & Co. ("Searle") patent applications in the area of HIV protease inhibition. Vertex paid \$15,000,000 and Glaxo Wellcome paid \$10,000,000 to Searle for the license. The Company also agreed to pay Searle a royalty on sales of amprenavir (VX-478), the Company's lead HIV compound.

The Company and Hoechst Marion Roussel ("HMR") are collaborating on the development of the interleukin-1 beta converting enzyme inhibitors, VX-740 as an anti-inflammatory agent. Under the collaborative agreement, HMR is obligated to pay the Company up to \$30,500,000, comprised of \$18,500,000 of product research funding over five years and \$12,000,000 of development and commercialization milestone payments. From the inception of the agreement in September 1993 through the year ended December 31, 1997, \$21,500,000, including a \$3,000,000 milestone

payment in December 1997 on the commencement of formal preclinical development, has been recognized as revenue. The Company received additional revenue related to reimbursements for clinical development in 1997. HMR has the right to terminate the agreement without cause upon twelve months' notice at any time. For a period of one year after any such termination, HMR retains the right to select one or more compounds for development and to license such compound or compounds from Vertex, provided HMR resumes all research funding and commercialization milestone payments and makes all such payments that would otherwise have been due but for such termination. Otherwise, in the case of such termination, all rights to compounds developed under the research and license agreements will revert to Vertex. The Company also received additional revenue related to reimbursement for patent filings in HMR's territories. Revenues earned under the HMR agreement were \$8,660,000, \$4,196,000 and \$3,749,000 in 1997, 1996 and 1995, respectively. Product research funding under this agreement ended on December 31, 1997.

The Company and Kissei are collaborating on the research and development of compounds in connection with the Company's HIV Program. Under the collaborative agreement, Kissei is obligated to pay the Company up to \$20,000,000, comprised of \$9,800,000 of product research funding through 1995, \$7,000,000 of development milestone and territory option payments and a \$3,200,000 equity investment. From the inception of the agreement in April 1993 through the year ended December 31, 1997, \$14,642,000 has been recognized as revenue. The Company received additional revenue related to reimbursements for clinical development in 1997, 1996 and 1995. During 1997, the Company also received \$4,000,000 related to reimbursements of certain development costs. Under the collaboration, Kissei is also required to pay Vertex a royalty on sales. Revenues earned under this Kissei agreement were \$4,310,000, \$692,000 and \$5,370,000 in 1997, 1996 and 1995, respectively. Product research funding under this agreement ended at December 31, 1995.

The Company and Chugai Pharmaceutical Co., Ltd. ("Chugai") entered into a collaborative agreement for research and development of immunosuppressive compounds in conjunction with Vertex's Autoimmune Diseases Program. Research funding under this agreement ended in the first half of 1995 and the research collaboration ended in October of 1995. Revenues earned under the Chugai Agreement were \$34,000 and \$1,915,000 in 1996 and 1995, respectively.

#### K. Employee Benefits

The Company has a 401(k) retirement plan in which substantially all of its permanent employees are eligible to participate. Participants may contribute up to 15% of their annual compensation to the plan, subject to statutory limitations. For 1997, the Company declared discretionary matching contributions to the plan in the aggregate amount of \$482,000, payable in the form of shares of the Company's Common Stock. Of these shares, 6,458 were issued as of December 31, 1997 with the remaining 7,113 issuable in 1998. For 1996, the Company declared discretionary matching contributions to the plan in the aggregate amount of \$426,000, payable in the form of shares of the Company's Common Stock. Of these shares, 7,013 were issued as of December 31, 1996 with the remaining 5,278 issued in 1997. For 1995, the Company declared discretionary matching contributions to the plan in the aggregate amount of \$354,000, payable in the form of 17,469 shares of the Company's Common Stock, issued in 1996.

#### L. Related Party

A sibling of the Company's President is a partner in the law firm representing the Company to which \$394,000, \$472,000 and \$255,000 in legal fees were paid in 1997, 1996 and 1995, respectively.

Exhibits Filed With This Annual Report on Form 10-K:

Exhibit Number -----	Exhibit Description -----
3.1	Restated Articles of Organization filed with the Commonwealth of Massachusetts on July 31, 1991.
3.2	Articles of Amendment Filed with the Commonwealth of Massachusetts on June 4, 1997.
3.3	Certificate of Vote of Directors Establishing a Series of a Class of Stock, as filed with the Secretary of the Commonwealth of Massachusetts on July 31, 1991.
10.4	Amendment to 1996 Stock and Option Plan adopted December 12, 1997.*
10.17	Second Amendment, dated 1 February 1998, to Lease between Fort Washington Realty Trust and the Company dated March 1 1993.
10.20	Second Amendment to Lease and Option Agreement dated June 12, 1997 between Fort Washington Realty Trust and the Company.
21	Subsidiaries of the Company.
23	Consent of Independent Accountants.
27	Financial Data Schedule (submitted as an exhibit only in the electronic format of this format of this Annual Report on Form 10-K submitted to the Securities and Exchange Commission.

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\* Compensatory plan or agreement applicable to management and employees.

FEDERAL IDENTIFICATION  
NO 04-3039129

The Commonwealth of Massachusetts  
MICHAEL JOSEPH CONNOLLY  
Secretary of State  
ONE ASHBURTON PLACE, BOSTON, MASS: 02108  
RESTATED ARTICLES OF ORGANIZATION  
General Laws, Chapter 156B, Section 74

This certificate must be submitted to the Secretary of the Commonwealth within sixty days after the date of the vote of stockholders adopting the restated articles of organization. The fee for filing this certificate is prescribed by General Laws, Chapter 156B Section 114. Make check payable to the Commonwealth of Massachusetts.

We, Joshua Boger, President  
Richard H. Aldrich, Clerk of  
Vertex Pharmaceuticals Incorporated  
(Name of Corporation)

located at 40 Allston Street, Cambridge, Massachusetts 02139 do hereby certify that the following restatement of the articles of organization of the corporation was duly adopted at a meeting held on May 24, 1991, by vote of

1,080,000	shares of common	out of 2,702,500 shares outstanding,
	(Class of Stock)	
5,051,955	shares of Series A	
	Convertible Preferred Stock	out of 5,279,227 shares
	outstanding, and	
	(Class of Stock)	
1,343,655	shares of Series B	
	Convertible Preferred Stock	out of 1,404,000 shares
	outstanding,	
	(Class of Stock)	

\*

being at least two-third of each class of stock outstanding and entitled to vote and of each class or series of stock adversely affected thereby:

1. The name by which the corporation shall be known is:  
Vertex Pharmaceuticals Incorporated
2. The purpose for which the corporation is formed are as follows:  
To develop, manufacture, market, and sell pharmaceutical products.  
To carry on any business or other activity which may be lawfully carried on by a corporation organized under the Business Corporation Law of the Commonwealth of Massachusetts whether or not related to those referred to in the foregoing paragraph.

\* 571,429 shares of Series C Convertible Preferred Stock out of 571,429 shares outstanding Note: If the space provided under any article or item on this form is insufficient, additions shall be set forth on separate 8 1/2 x 11 sheets of paper leaving a left hand margin of at least 1 inch for binding. Additions to more than one article may be continued on a single sheet so long as each article requiring each such addition is clearly indicated.

3. The total number of shares and the par value, if any, of each class of stock which the corporation is authorized to issue is as follows:

Class of Stock	Without Par Value	With Par Value	
	Number of Shares	Number of Shares	Par Value
Preferred	None	1,000,000	\$.01
Common	None	25,000,000	\$.01

\*4. If more than one class is authorized, a description of each of the different classes of stock with, if any, the preferences, voting powers, qualifications, special or relative rights or privileges as to each class thereof and any series now established:

See Attached.

\*5. The restrictions, if any, imposed by the articles of organization upon the transfer of shares of stock of any class are as follows:

None.

\*6. Other lawful provisions, if any, for the conduct and regulation of the business and affairs of the corporation, for its voluntary dissolution, or for limiting, defining, or regulating the powers of the corporation, or of its directors or stockholders, or of any class of stockholders:

See Attached.

\*If there are no such provisions, state "None".

## AMENDMENTS

### 1. Article 3 is amended as follows:

(i) Every three shares of the Common Stock, \$.01 par value, of the Corporation outstanding on the effective date of these Restated Articles of Organization shall on such effective date be combined into two shares of Common Stock, \$.01 par value; provided, that no fractional shares shall be issued in connection with such combination and the fair value of fractional shares resulting therefrom shall be paid in cash to holders who would otherwise have received such fractional shares; and provided, further, that in connection with the foregoing, no changes shall be made in the capital or surplus account of the Corporation.

(ii) In connection and simultaneously with the combination described above, the authorized Common Stock, \$.01 par value, of the Corporation shall be reduced from 11,024,000 shares to 7,349,333 shares; provided, that in connection with the foregoing, no changes shall be made in the capital or surplus account of the Corporation.

(iii) Every three shares of each series of the Convertible Preferred Stock, \$.01 par value, of the Corporation outstanding on the effective date of these Restated Articles of Organization shall on such effective date, pursuant to the terms of such Convertible Preferred Stock, be automatically converted into two shares of Common Stock, \$.01 par value; provided, that no fractional shares shall be issued in connection with said conversion and the fair value of fractional shares resulting therefrom shall be paid in cash to holders who would have otherwise received such fractional shares.

(iv) In connection and simultaneously with the conversion described above, the entire class, including each series of such class, of Convertible Preferred Stock, \$.01 par value, of the Corporation shall be cancelled and withdrawn from the authorized capital stock of the Corporation.

(v) Immediately following the foregoing, the amount of the authorized capital stock of the Corporation shall be increased to 26,000,000 shares, consisting of 25,000,000 shares of Common Stock, \$.01 par value, and 1,000,000 shares of Preferred Stock, \$.01 par value.

### 2. Article 4 is amended as follows:

(i) The class of Preferred Stock, \$.01 par value, authorized pursuant to Article 3 is authorized to be issued by the Board of Directors, in one or more series, as set forth in Article 4 of these Restated Articles of Organization.



3. Article 6 is amended as follows:

- (i) The first paragraph, relating to Amendment of the By-Laws, is designated as Part A.
- (ii) The second paragraph, relating to Meetings of Stockholders, is designated as Part B.
- (iii) The third paragraph, relating to Partnership Agreements, is designated as Part C.
- (iv) The fourth paragraph, relating to liability of Directors, is designated as Part D.
- (v) There is added as a new Part E provisions relating to (a) the election of a classified Board of Directors, (b) nomination of directors, (c) filling of newly created directorships and vacancies, (d) removal of directors, (e) election of directors by holders of Preferred Stock, and (f) amendment or repeal of the provisions set forth in Part E.

ARTICLE 4

A. Common Stock

The holders of shares of Common Stock of the Corporation shall be entitled to one vote for each share of such stock held by them, respectively, upon all matters presented to the stockholders. The Common Stock shall be subject to the special provisions applicable to any series of Preferred Stock issued by the Board of Directors, as hereinafter provided.

B. Preferred Stock.

The Preferred Stock may be issued by the Board of Directors, in one or more series and with such rights, powers, preferences, and terms and at such times and for such consideration as the Board of Directors shall determine, without further stockholder action. With respect to any such series of Preferred Stock, prior to issuance, the Board of Directors by resolution shall designate that series to distinguish it from other series and classes of stock of the Corporation, shall specify that number of shares to be included in the series, and shall fix the rights, powers, preferences, and terms of the shares of the series, including but without limitation: (1) the dividend rate, its preference as to any other class or series of capital stock, and whether dividends will be cumulative or non cumulative; (ii) whether the shares are to be redeemable and, if so, at what times and prices and on what other terms and conditions; (iii) the terms and amount of any sinking fund provided for the purchase of redemption for the shares; (iv) whether the shares shall be convertible or exchangeable and, if so, the times, prices, rates, adjustments, and other terms of such conversion or exchange; (v) the voting rights, if any, applicable to the shares in addition to those prescribed by law; (vi) the restrictions and conditions, if any, on the issue or reissue of any additional shares of such series or of any other series of Preferred Stock ranking on a parity with or prior to the shares of such series; and (vii) the rights of the holders of such shares upon voluntary or involuntary liquidation, dissolution, or winding up of the Corporation.

ARTICLE 6

A. Amendment of By-Laws

To the extent and the manner provided in the By-Laws, the Board of Directors may make, amend, or repeal the By-Laws in whole or in part, except with respect to any provision thereof which by law or by the By-Laws requires action by the stockholders.

B. Meetings of Stockholders

To the extent and in the manner provided in the By-Laws, meetings of the stockholders may be held anywhere within the Commonwealth of Massachusetts or elsewhere in the United States.

C. Partnership Agreements

The Corporation may enter into partnership agreements (general or limited) and joint ventures with any person, firm, association, or corporation engaged in carrying on any business in which the Corporation is authorized to engage, or in connection with carrying out all or any of the purposes of the Corporation.

D. Liability of Directors

No director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director; provided, however, that this provision shall not eliminate or limit the liability of a director to the extent provided by applicable law (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of laws, (iii) under Section 61 or 62 of the Business Corporation Law, Chapter 156B, of the Commonwealth of Massachusetts, or (iv) for any transactions from which the director derived an improper personal benefit. No amendment to or repeal of this provision shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal.

E. Board of Directors

1. Number, Election and Terms. Subject to the rights of the holders of any series of Preferred Stock to elect directors who shall serve for such term and have such voting powers as shall be provided in Article 4 of these Articles, the Board of Directors shall consist of such number of persons as shall be provided in the Corporation's By-Laws. The Board of Directors shall be classified with respect to the time for which its members shall severally hold office by dividing them into three classes, as nearly equal in number as possible, with the term of office of one class expiring at the annual meeting of stockholders each year. At each annual meeting of the stockholders of the Corporation, the successors to the class of directors whose term expires at that meeting shall be elected to hold office for a term expiring at the annual meeting of stockholders held in the third year following the year of their election. If the number of directors

is changed, any increase or decrease shall be apportioned by the Board of Directors among the classes so as maintain the number of directors in each class as nearly equal as possible. Each director shall hold office until the annual meeting for the year in which such director's term expires and until such director's successor shall be elected and shall qualify. No director need be a stockholder.

2. Nomination. Advance notice of nominations for the election of directors, other than by the Board of Directors or a committee thereof, shall be given within the time and in the manner provided in the By-Laws.

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

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

5. Directors Elected by Holders of Preferred Stock. Whenever the holders of any class or series of Preferred Stock or of any other class or series of shares issued by the Corporation shall have the right, voting separately as a class or series, to elect one or more directors under specified circumstances, the election, term of office, filling of vacancies, and other features of such directorships shall be governed by the terms of these Articles applicable to such class or series, and none of the provisions of this Part E shall apply with respect to directors so elected.

6. Amendment, Repeal, etc. Notwithstanding any other provision of these Articles to the contrary, the affirmative vote of the holders of at least 80% of the voting power of the then outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to alter, amend, adopt any provision inconsistent with, or repeal this Part E or any provision thereof.



THE COMMONWEALTH OF MASSACHUSETTS  
RESTATED ARTICLES OF ORGANIZATION  
(General Laws, Chapter 156B, Section 74)

I hereby approve the within restated articles of organization and, the filing fee in the amount of \$19,150.67 having been paid, said articles are deemed to have been filed with me this 31st day of July, 1991

/S/  
-----  
MICHAEL JOSEPH CONNOLLY  
Secretary of State

TO BE FILLED IN BY CORPORATION

PHOTOCOPY OF RESTATED ARTICLES OF ORGANIZATION TO BE SENT TO:

Timothy B. Bancroft, Esq.  
Warner & Stackpole  
75 State Street, Boston, MA 02109  
Telephone (617) 951-9000

Copy Mailed

The Commonwealth of Massachusetts  
William Francis Galvin  
Secretary of the Commonwealth  
One Ashburton Place, Boston, Massachusetts 02108-1512

ARTICLES OF AMENDMENT  
(General laws, Chapter 156B, Section 72)

We, Thomas G. Auchincloss, Jr. \*President/Vice President,  
-----  
and Richard H. Aldrich, \*Clerk/Assistant Clerk,  
-----  
of Vertex Pharmaceuticals Incorporated  
-----  
(Exact name of corporation)

located at: 130 Waverly Street, Cambridge, Massachusetts 02139-4242  
-----  
(Street address of corporation in Massachusetts)

certify that these Articles of Amendments affecting articles numbered:

3  
-----  
(number those articles 1, 2, 3, 4, 5, and/or 6 being amended)

of the Articles of Organization were duly adopted at a meeting held on May 8,  
1997, by vote of: 18,591,245 shares of Common Stock of 24,680,649 shares  
outstanding.

(type, class & series if any)

shares of of shares outstanding and  
-----  
(type, class & series if any)

shares of of shares outstanding.  
-----  
(type, class & series if any)

\*\* being at least a majority of each type, class or series outstanding and  
entitled to vote thereon:/ or 2\*\* being at least two thirds of each  
<#>type, class or series outstanding and entitled to vote thereon and of  
<#>each type, class or series of stock whose rights are adversely affected  
<#>thereby:

(see page 2)

\*Delete the inapplicable words \*\*Delete the inapplicable clause.  
(1)For amendments adopted pursuant to Chapter 156B, Section 70. (2)For  
amendments adopted pursuant to Chapter 156B, Section 71. Note: if the space  
provided under any article or item on this form is insufficient, additions  
shall be set forth on one side only of separate 8-1/2 x 11 sheets of paper  
with a left margin of at least 1 inch. Additions to more than one article  
may be made on a single sheet so long as each article requiring each addition  
is clearly indicated.

To change the number of shares and the par value (if any) of any type, class or series of stock which the corporation is authorized to issue, fill in the following:

WITHOUT PAR VALUE STOCKS		WITH PAR VALUE STOCKS		
TYPE	NUMBER OF SHARES	TYPE	NUMBER OF SHARES	PAR VALUE
Common:		Common:	50,000,000	\$.01_____
Preferred:		Preferred:	1,000,000	\$.01_____

Change the total authorized to:

WITHOUT PAR VALUE STOCKS		WITH PAR VALUE STOCKS		
TYPE	NUMBER OF SHARES	TYPE	NUMBER OF SHARES	PAR VALUE
Common:		Common:	100,000,000	\$.01_____
Preferred:		Preferred:	1,000,000	\$.01_____

VOTED: To increase the number of shares of Common Stock, \$.01 par value per share that the Corporation shall have authority to issue from 50,000,000 shares to 100,000,000 shares; and that Article 3 of the Corporation's Restated Articles of Organization be, and hereby is, amended to read as follows:

3. The total number of shares and the par value, if any, of each class of stock which the Corporation shall be authorized to issue is as follows: 1,000,000 shares of Preferred Stock, \$.01 par value per share and 100,000,000 shares of Common Stock, \$.01 par value per share.



The foregoing amendment(s) will become effective when these Articles of Amendment are filed in accordance with General Laws, Chapter 156B, Section 6 unless these articles specify, in accordance with the vote adopting the amendment, a later effective date not more than thirty days after such filing, in which event the amendment will become effective on such later date.

Later effective date: \_\_\_\_\_

SIGNED UNDER THE PENALTIES OF PERJURY, this 30th day of May , 1997.

/s/ \_\_\_\_\_, \*<#>President/ \*<#>Vice President,

-----  
Thomas G. Auchincloss, Jr.

/s/ \_\_\_\_\_, \*Clerk/ \*<#>Assistant Clerk

Richard H. Aldrich

\*Delete the inapplicable words.

THE COMMONWEALTH OF MASSACHUSETTS  
ARTICLES OF AMENDMENT  
(General Laws, Chapter 156B, Section 72)

-----  
-----  
I hereby approve the within Articles of Amendment, and the filing fee in the amount of \$50,000 having been paid, said article is deemed to have been filed with me this 4th day of June, 1997.

Effective date: \_\_\_\_\_

/S

WILLIAM FRANCIS GALVIN  
Secretary of the Commonwealth

TO BE FILLED IN BY CORPORATION  
Photocopy of document to be sent to:

Sarah P. Cecil  
Vertex Pharmaceuticals Incorporated  
130 Waverly Street  
Cambridge, MA 02139-4242

Federal Identification  
No. 04-3039129

The Commonwealth of Massachusetts  
OFFICE OF THE MASSACHUSETTS SECRETARY OF STATE  
MICHAEL JOSEPH CONNOLLY, SECRETARY  
ONE ASHBURTON PLACE, BOSTON, MASS. 02108

CERTIFICATE OF VOTE OF DIRECTORS ESTABLISHING  
A SERIES OF A CLASS OF STOCK

General Laws, Chapter 156B, Section 26

We, Joshua Boger, President and  
Richard H. Aldrich, Clerk of

Vertex Pharmaceuticals Incorporated  
(Name of Corporation)

located at 40 Allston Street, Cambridge, Massachusetts 02139 do hereby certify  
that by unanimous written consent of the Board of Directors as of July 1, 1991,  
the following vote establishing and designating a series of class of stock and  
determining the relative rights and preferences thereof was duly adopted.

See attached.

Note: Votes for which the space provided above is not sufficient should be set  
out on continuation sheets to be numbered 2A, 2B etc. Continuation sheets must  
have a left-hand margin 1 inch wide for binding and shall be 8 1/2" x 11". Only  
one side should be used.

VOTED, that pursuant to the authority granted to and vested in the Board of Directors of this Corporation (hereinafter called the "Board of Directors" or the "Board") by the provisions of the Restated Articles of Organization of the Corporation approved by the Board on May 23, 1991 and approved by the stockholders of the Corporation on May 24, 1991, the Board of Directors hereby establishes a series of Preferred Stock (the "Preferred Stock") of Restated Articles of Organization with the Secretary of the Commonwealth of Massachusetts, and hereby states the designation and number of shares, and prescribes the relative rights and preferences thereof as follows:

Series A Junior Participating Preferred Stock:

Section 1. Designation and Amount. The shares of such series shall be designated as "Series A Junior Participating Preferred Stock" (the "Series A Preferred Stock") and the number of shares constituting the Series A Preferred Stock shall be 250,000. Such number of shares may be increased or decreased by resolution of the Board of Directors; provided, that no decrease shall reduce the number of shares of Series A Preferred Stock to a number less than the number of shares then outstanding plus the number of shares reserved for issuance upon the exercise of outstanding options, rights or warrants, or the conversion of any outstanding securities, issued by the Corporation exercisable for or convertible into Series A Preferred Stock.

Section 2. Dividends and Distributions.

(A) Subject to the rights of the holders of any shares of any series of Preferred Stock (or any similar stock) ranking prior and superior to the Series A Preferred Stock with respect to dividends, the holders of shares of Series A Preferred Stock, in preference to the holders of Common Stock, par value \$.01 per share (the "Common Stock"), of the Corporation, and of any other junior stock, shall be entitled to receive, when, as and if declared by the Board of Directors out of funds legally available for the purpose, quarterly dividends payable in cash on the first day of March, June, September and December in each year (each such date being referred to herein as a "Quarterly Dividend Payment Date"), commencing on the first Quarterly Dividend Payment Date after the first issuance of a share or fraction of a share of Series A Preferred Stock, in an amount per share (rounded to the nearest cent) equal to the greater of (a) \$1 or (b) subject to the provisions for adjustment hereinafter set forth, 100 times the aggregate per share amount of all cash dividends, and 100 times the aggregate per share amount (payable in kind) of all non-cash dividends or other distributions, other than a dividend payable in shares of Common Stock or a subdivision of the outstanding shares of Common Stock (by reclassification or otherwise), declared on the Common Stock since the immediately preceding Quarterly

Dividend Payment Date or, with respect to the first Quarterly Dividend Payment Date, since the first issuance of any share or fraction of a share of Series A Preferred Stock. In the event the Corporation shall at any time declare or pay any dividend on the Common Stock payable in shares of Common Stock, or effect a subdivision or combination or consolidation of the outstanding shares of Common Stock (by reclassification or otherwise than by payment of a dividend in shares of Common Stock) into a greater or lesser number of shares of Common Stock, then in each such case the amount to which holders of shares of Series A Preferred Stock were entitled immediately prior to such event under clause (b) of the preceding sentence shall be adjusted by multiplying such amount by a fraction, the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

(B) The Corporation shall declare a dividend or distribution on the Series A Preferred Stock as provided in paragraph (A) of this Section immediately after it declares a dividend or distribution on the Common Stock (other than a dividend payable in shares of Common Stock); provided, that, in the event no dividend or distribution shall have been declared on the Common Stock during the period between any Quarterly Dividend Payment Date and the next subsequent Quarterly Dividend Payment Date, a dividend of \$1 per share on the Series A Preferred Stock shall nevertheless be payable on such subsequent Quarterly Dividend Payment Date.

(C) Dividends shall begin to accrue and be cumulative on outstanding shares of Series A Preferred Stock from the Quarterly Dividend Payment Date next preceding the date of issue of such shares, unless the date of issue of such shares is prior to the record date for the first Quarterly Dividend Payment Date, in which case dividends on such shares shall begin to accrue from the date of issue of such shares, or unless the date of issue is a Quarterly Dividend Payment Date or is a date after the record date for the determination of holders of shares of Series A Preferred Stock entitled to receive a quarterly dividend and before such Quarterly Dividend Payment Date, in either of which events such dividends shall begin to accrue and be cumulative from such Quarterly Dividend Payment Date. Accrued but unpaid dividends shall not bear interest. Dividends paid on the shares of Series A Preferred Stock in an amount less than the total amount of such dividends at the time accrued and payable on such shares shall be allocated pro rata on a share-by-share basis among all such shares at the time outstanding. The Board of Directors may fix a record date for the determination of holders of shares of Series A Preferred Stock entitled to receive payment of a dividend or distribution declared thereon, which record date shall be

not more than 60 days prior to the date fixed for the payment thereof.

Section 3. Voting Rights. The holders of shares of Series A Preferred Stock shall have the following voting rights:

(A) Each share of Series A Preferred Stock shall entitle the holder thereof to 100 votes on all matters submitted to a vote of the stockholders of the Corporation.

(B) Except as otherwise provided herein, in any other Certificate of Vote of Directors establishing a series of Preferred Stock or any similar stock, or by law, the holders of shares of Series A Preferred Stock and the holders of shares of Common Stock and any other capital stock of the Corporation having general voting rights shall vote together as one class on all matters submitted to a vote of the stockholders of the Corporation.

(C) Except as otherwise provided herein, or by law, holders of shares of Series A Preferred Stock shall have no special voting rights and - their consent shall not be required (except to the extent they are entitled to vote with holders of shares of Common Stock as set forth herein) for taking any corporate action.

Section 4. Certain Restrictions.

(A) Whenever quarterly dividends or other dividends or distributions payable on the Series A Preferred Stock as provided in Section 2 are in arrears, thereafter and until all accrued and unpaid dividends and distributions, whether or not declared, on shares of Series A Preferred Stock outstanding shall have been paid in full, the Corporation shall not:

(i) declare or pay dividends, or make any other distributions, on any shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Preferred Stock;

(ii) declare or pay dividends, or make any other distributions, on any shares of stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Preferred Stock, except dividends paid ratably on the Series A Preferred Stock and all such parity stock on which dividends are payable or in arrears in proportion to the total amounts to which the holders of all such shares are then entitled;

(iii) redeem or purchase or otherwise acquire for consideration any shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Preferred Stock; provided,

that the Corporation may at any time redeem, purchase or otherwise acquire shares of such junior stock in exchange for shares of stock of the Corporation ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A-Preferred Stock; or

(iv) redeem or purchase or otherwise acquire for consideration any shares of Series A Preferred Stock, or any shares of stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Preferred Stock, except-in accordance with a purchase offer made in writing or by publication (as determined by the Board of Directors) to all holders of such shares upon such terms as the Board of Directors, after consideration of the respective annual dividend rates and other relative rights and preferences of the respective series and classes, shall determine in good faith will result in fair and equitable treatment among the respective series or classes.

(B) The Corporation shall not permit any subsidiary of the Corporation to purchase or otherwise acquire for consideration any shares of stock of the Corporation unless the Corporation could, under paragraph (A) of this Section, purchase or otherwise acquire such shares at such time and in such manner.

Section 5. Reacquired Shares. Any shares of Series A Preferred Stock purchased or otherwise acquired by the Corporation in any manner whatsoever shall be retired and cancelled promptly after the acquisition thereof. All such shares shall upon their cancellation become authorized but unissued shares of Preferred Stock and may be reissued as part of a new series of Preferred Stock subject to the conditions and restrictions on issuance set forth herein, in the Restated Articles of Organization, or in any other Certificate of Vote of Directors establishing a series of Preferred Stock or any similar stock or as otherwise required by law.

Section 6. Liquidation, Dissolution or Winding Up. Upon any liquidation, dissolution or winding up of the Corporation, no distribution shall be made (1) to the holders of shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Preferred Stock unless, prior thereto, the holders of shares of Series A Preferred Stock shall have received \$100 per share, plus an amount equal to accrued and unpaid dividends and distributions thereon, whether or not declared, to the date of such payment; provided, that the holders of shares of Series A Preferred Stock shall be entitled to receive an aggregate amount per share, subject to the provision for adjustment hereinafter set forth, equal to 100 times the aggregate amount to be distributed per share to holders of shares

of Common Stock, or (2) to the holders of shares of stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Preferred Stock, except distributions made ratably on the Series A Preferred Stock and all such parity stock-in proportion to the total amounts to which the holders of all such shares are entitled upon such liquidation, dissolution or winding up. In the event the Corporation shall at any time declare or pay any dividend on the Common Stock payable in shares of Common Stock, or effect a subdivision or combination or consolidation of the outstanding shares of Common Stock (by reclassification or otherwise than by payment of a dividend in shares of Common Stock) into a greater or lesser number of shares of Common Stock, then in each such case the amount to which holders or shares of Series A Preferred Stock were entitled immediately prior to such event under the proviso to clause (1) of the preceding sentence shall be adjusted by multiplying such amount by a fraction, the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

Section 7. Consolidation, Merger, etc. In case the Corporation shall enter into any consolidation, merger, combination or other transaction in which the shares of Common Stock are exchanged for or changed into other stock or securities, cash and/or any other property, then in any such case each share of Series A Preferred Stock shall at the same time be similarly exchanged for or changed into an amount per share, subject to the provision for adjustment hereinafter set forth, equal to 100 times the aggregate amount of stock, securities, cash and/or any other property (payable in kind), as the case may be, into which or for which each share of Common Stock is changed or exchanged. In the event the Corporation shall at any time declare or pay any dividend on the Common Stock payable in shares of Common Stock, or effect a subdivision or combination or consolidation of the outstanding shares of Common Stock (by reclassification or otherwise than by payment of a dividend in shares of Common Stock) into a greater or lesser number of shares of Common Stock, then in each such case the amount set forth in the preceding sentence with respect to the exchange or change of shares of Series A Preferred Stock shall be adjusted by multiplying such amount by a fraction, the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

Section 8. No Redemption. The shares of Series A Preferred Stock shall not be redeemable.

Section 9. Rank. The Series A Preferred Stock shall rank, with respect to the payment of dividends and the distribution of assets, junior to all series of any other class of the Corporation's Preferred Stock.



Section 10. Amendment. The Restated Articles of Organization of the Corporation shall not be amended in any manner which would materially alter or change the powers, preferences or special rights of the Series A Preferred Stock so as to affect them adversely without the affirmative vote of the holders of at least two-thirds of the outstanding shares of Series A Preferred Stock, voting together as a single class.

Continuation Sheet 2F

IN WITNESS WHEREOF AND UNDER THE PENALTIES OF PERJURY, we have hereto signed our names this 30th day of July in the year 1991.

/S/

-----  
Joshua Boger, President

/S/

-----  
Richard H. Aldrich, Clerk

THE COMMONWEALTH OF MASSACHUSETTS

Certificate of Vote of Directors Establishing  
A Series of a Class of Stock  
(General Laws, Chapter 156B, Section 26)

I hereby approve the within certificate and, the  
filing fee in the amount of \$100.00  
having been paid, said certificate is hereby filed this  
31st day of July, 1991

/s/

MICHAEL JOSEPH CONNOLLY  
Secretary of State

TO BE FILLED IN BY CORPORATION  
Photo copy of certificate to be sent

TO:

Timothy B. Bancroft, Esq.  
Warner & Stackpole  
75 State Street, Boston, MA 02109

Telephone: (617) 951-9000

Exhibit 10.4

FIRST AMENDMENT  
to  
VERTEX PHARMACEUTICALS INCORPORATED  
1996 STOCK AND OPTION PLAN

The Vertex Pharmaceuticals Incorporated 1996 Stock and Option Plan (the "Plan") is hereby amended, effective as of December 12, 1997, as follows:

Section 3 of the Plan is hereby amended by deleting the first sentence thereof and substituting therefor the following:

"The number of Shares subject to this Plan as to which Stock Rights may be granted from time to time shall be 3,250,000 plus the number of shares of Common Stock previously reserved for the granting of options under the Vertex Pharmaceuticals Incorporated 1991 Stock Option Plan and 1994 Stock and Option Plan but not granted thereunder, or the equivalent of such number of Shares after the Committee, in its sole discretion, has interpreted the effect of any stock split, stock dividend, combination, recapitalization or similar transaction in accordance with Section 17 of this Plan."

As so amended, the Plan shall continue in full force and effect.

Second Amendment, dated 1 February 1998, to Lease Agreement  
between Fort Washington Realty Trust and Vertex Pharmaceuticals Incorporated  
Dated 1 March 1993

Fort Washington Realty Trust and Vertex Pharmaceuticals Incorporated, hereby agree to amend the First Amendment to and the current lease on 625 Putnam Avenue, Cambridge, dated 1 March 1993, as follows:

page 2, Section 2 & 3 of original lease and line 3 of First  
Amendment: Extension of term  
Term: 1 February 1997 through 31 December 1998  
Rent: 15,750 sq ft at \$15.24/sq ft/yr= \$240,000/yr = \$20,000/month  
Additional Term: 1 January 1999 through 31 December 2000  
Rent: 15,750 sq ft at \$18.00/sq ft/yr= \$283,500/yr = \$23,625/month

page 36, Section 11.10: Option to extend beyond first extension:  
Tenant's option to Extend: 1 January 2001 through 31 December 2003  
Rent for Option Period: 15,750 sq ft at \$21.33/sq ft/yr  
= \$336,000/yr = \$28,000/month

Triple-net of all taxes, insurance, utilities, and operating expenses.

This Second Amendment replaces the First Amendment in its entirety

All other provisions of said lease shall remain unchanged.

Signatories certify that they are empowered to commit their respective organizations in matters pertaining to this agreement, executed in February 1998.

LESSOR:

LESSEE:

/S

/S

-----  
Fort Washington Realty Trust  
By: Henry H. Kolm, Trustee  
Elizabeth C. Kolm, Trustee  
Date: 30 January, 1998

-----  
Vertex Pharmaceuticals Incorporated  
By: Richard H. Aldrich,  
Senior VP, Chief Business Officer  
Date: 2 February 1998

SECOND AMENDMENT TO LEASE

This SECOND AMENDMENT TO LEASE is made by and between David E. Clem and David M. Roby, Trustees of Fort Washington Realty Trust under Declaration of Trust dated June 19, 1995 and recorded with the Middlesex County (South District) Registry of Deeds in Book 25422, Page 360 (the "Landlord") and Vertex Pharmaceuticals Incorporated (the "Tenant").

Reference is hereby made to that certain lease (the "Lease") dated March 3, 1995, by and between Landlord's predecessor, Fort Washington Limited Partnership and Tenant with respect to a portion of the property (the "Premises") located at 40 Erie Street, Cambridge, Massachusetts, (the "Building") as more particularly described in the Lease as amended by a First Amendment to Lease (the "First Amendment").

WHEREAS, the Tenant has requested, and the Landlord has agreed, to further amend the Lease to add additional space to the Premises upon the terms and conditions set forth in this Second Amendment to Lease.

WHEREAS, Landlord and Tenant desire to amend and modify the terms of the Lease to incorporate the additional space and to ratify and confirm the terms of the Lease as amended by the First Amendment as more particularly set forth below.

NOW, THEREFORE, in consideration of the mutual promises herein contained, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

1. Upon occupancy by Tenant, the definition of the Premises set forth in the Lease shall be amended to include the addition of 41,132, r.s.f. of space (the "Additional Space") in the Building currently leased to Millennium Pharmaceuticals, Inc. ("Millennium"). See Exhibit A annexed hereto for the layout of the Additional Space.
2. Tenant shall take occupancy of the Additional Space beginning on the later of (i) the date upon which Millennium vacates the Additional Space, or (ii) March 19, 1999, and continuing for a period of ten (10) years from the date upon which Tenant occupies the Additional Space (the "Additional Space Term"). On or after March 19, 1999, if necessary, Landlord shall use best efforts to expedite Millennium's departure from the Additional Space, including filing an eviction proceeding. Landlord warrants and represents that according to the terms of its lease with Millennium that the lease expires on March 18, 1999 as to the Premises and the associated parking spaces. As to the Premises and the associated parking spaces, Landlord hereby agrees that Landlord will not extend or renew the term of Millennium's lease or waive any failure by Millennium to vacate. Landlord shall not be held liable for any loss or damage incurred by Tenant as a result of hold-over by Millennium. Landlord represents that in addition to other sums for holding over, Millennium must pay a holdover premium equal to the greater of (a) twice the then fair market rent as reasonably determined by Landlord, or (b) the total of the Fixed Rent, Additional

Rent (as those terms are defined in the Millennium lease) and all other payments then payable under the Millennium lease. Landlord agrees that it shall not waive the payment to Landlord of any such holdover premium by Millennium.

Provided that Tenant has exercised in each instance its options to extend the Lease Term for the original Premises: (a) Tenant shall have two (2) options to extend the Additional Space Term (the "Additional Space Options") for successive periods of five (5) years each (the "Additional Space Extension Periods"), subject to and on the terms set forth herein. Tenant may only exercise the Additional Space Options with respect to the entire Additional Space. If Tenant shall desire to exercise any Additional Space Option, it shall give Landlord a notice (the "Additional Space Inquiry Notice") of such desire not later than fifteen (15) months prior to the expiration of the Additional Space Term of this Lease or the preceding Additional Space Extension Period, as the case may be. Thereafter, the Fair Market Rent (as defined in Subsection (c) below) for the applicable Additional Space Extension Period shall be determined in accordance with Subsection (d) below. After the applicable Fair Market Rent has been so determined, Tenant shall exercise each Additional Space Option by giving Landlord notice (the "Additional Space Exercise Notice") of its election to do so not later than twelve (12) months prior to the expiration of the Additional Space Term of this Lease, or the preceding Additional Space Extension Period, as the case may be. If Tenant fails to timely give either the Additional Space Inquiry Notice or the Additional Space Exercise Notice to Landlord with respect to any Additional Space Option, Tenant shall be conclusively deemed to have waived such Additional Space Option hereunder.

(b) Notwithstanding any contrary provision of this Lease, each Additional Space Option and any exercise by Tenant thereof shall be void and of no force or effect unless on the dates Tenant gives Landlord its Additional Space Inquiry Notice and Additional Space Exercise Notice for each Additional Space Option and on the date of commencement of each Additional Space Extension Period (i) this Lease is in full force and effect, (ii) there is no Event of Default of Tenant under this Lease, and (iii) Tenant has not assigned or subleased (or agreed to assign or sublease) more than fifty percent (50%) of the rentable floor area then comprising the Additional Space.

(c) All of the terms, provisions, covenants, and conditions of this Lease shall continue to apply during each Additional Space Extension Period, except that the Additional Space Annual Fixed Rent Rate during each Additional Space Extension Period (the "Extension Rent") shall be equal to the fair market rent for the Additional Space determined as of the date twelve (12) months prior to expiration of the Additional Space Term or the preceding Additional Space Extension Period, as the case may be, in accordance with the procedure set forth in Subsection (d) below (the "Fair Market Rent").

(d) The Fair Market Rent for each Additional Space Extension Period shall be determined as follows: Within five (5) days after Tenant gives Landlord its Additional Space Inquiry Notice with respect to any Additional Space Option, Landlord shall give Tenant notice of Landlord's determination of the Fair Market Rent for the applicable Additional Space Extension Period. Within ten (10) days after Tenant receives such notice, Tenant shall notify Landlord of its agreement with or objection to Landlord's determination of the Fair Market Rent, whereupon the Fair Market Rent shall be determined by arbitration conducted in the manner set forth below. If Tenant does not notify Landlord within such ten (10) day period of Tenant's agreement with or objection to Landlord's determination of the Fair Market Rent, then the Fair Market Rent for the applicable Additional Space Extension Period shall be deemed to be Landlord's determination of the Fair Market Rent as set forth in the notice from Landlord described in this subsection.

(e) If Tenant notifies Landlord of Tenant's objection to Landlord's determination of Fair Market Rent under the preceding subsection, such notice shall also set forth a request for arbitration and Tenant's appointment of a commercial real estate broker having at least ten (10) years experience in the commercial leasing market in the City of Cambridge, Massachusetts (an "Arbitrator"). Within five (5) days thereafter, Landlord shall by notice to Tenant appoint a second Arbitrator. Each Arbitrator shall be advised to determine the Fair Market Rent for the applicable Additional Space Extension Period within thirty (30) days after Landlord's appointment of the second Arbitrator. On or before the expiration of such thirty (30) day period, the two Arbitrators shall confer to compare their respective determinations of the Fair Market Rent. If the difference between the amounts so determined by the two Arbitrators is less than or equal to ten percent (10%) of the lower of said amounts then the final determination of the Fair Market Rent shall be equal to the average of said amounts. If such difference between said amounts is greater than ten percent (10%), then the two arbitrators within ten (10) days thereafter shall appoint a third Arbitrator (the "Third Arbitrator"), who shall be instructed to determine the Fair Market Rent for the applicable Additional Space Extension Period within ten (10) days after his appointment by selecting one of the amounts determined by the other two Arbitrators. Each party shall bear the cost of the Arbitrator selected by such party. The cost for the Third Arbitrator, if any, shall be shared equally by Landlord and Tenant.

3. Tenant shall accept the Additional Space in "as is" condition. Tenant acknowledges that Landlord has made, in anticipation of Tenant's future occupancy, for the benefit of Tenant at Landlord's sole cost and expense, certain improvements to the Additional Space as outlined in Exhibit B. Landlord agrees to consult with Tenant prior to agreeing to any changes requested by Millennium to the Additional Space.



4. Upon execution of this Second Amendment to Lease, section 4.1(d) of the Lease will be stricken in its entirety and be null and void and of no further force and effect.
5. Upon occupancy by Tenant of the Additional Space, Tenant shall pay to Landlord Annual Fixed Rent for the Additional Space in the amount of \$1,460,186.00 (the "Additional Space Annual Fixed Rent Rate"), payable in equal monthly installments of \$121,682.17 in advance on the first day of each calendar month; and for any portion of a calendar month at the beginning or end of the Term, at that rate payable in advance for such portion.
6. Article 4.1(b) shall be renumbered as 4.1(b)(1) and the following shall be added to the Lease as Article 4.1(b)(2):
  - (b) (2) Adjustment for CPI - Additional Space. (a) On December 31, 2000 (the "First Adjustment Date"), the Additional Space Annual Fixed Rent Rate shall be increased by multiplying said rate by the lesser of (i) a fraction, the numerator of which shall be the Price Index (as hereinafter defined) most recently established prior to the First Adjustment Date, and the denominator of which shall be the Base Price Index (as hereinafter defined), or (ii) one hundred four percent (104%) per year, compounded annually over the period of time beginning April 1, 1997 through the First Adjustment Date. (b) On December 31, 2005 (the "Second Adjustment Date"), the Additional Space Annual Fixed Rent Rate (as adjusted) shall be increased by multiplying said rate by the lesser of (i) a fraction, the numerator of which shall be the Price Index (as hereinafter defined) most recently established prior to the Second Adjustment Date, and the denominator of which shall be the Base Price Index (as hereinafter defined), or (ii) one hundred four percent (104%) per year, compounded annually over the five (5) years of the Additional Space Term of this Lease. As used herein, the term "Price Index" shall mean and refer to the "Consumer Price Index for Urban Wage Earners and Clerical Workers, for the Boston, Massachusetts area, All Items (1982-84 = 100)" published by the Bureau of Labor Statistics of the United States Department of Labor or successor or substitute index appropriately adjusted, and the term "Base Price Index" shall mean and refer to the Price Index most recently established prior to the Commencement Date. In the event the Price Index (or a successor or substitute index) shall not be published for the City of Boston, Massachusetts area or for the months indicated above, the corresponding index for the United States City Average (and if this is not available, a reliable governmental or other nonpartisan publication evaluating similar or equivalent information as used in the Price Index) shall be used. In the event the Price Index ceases to use the 1982-84 average of

100 as the basis of calculation, or if a substantial change is made in the terms or numbers of items contained in the Price Index, then the Price Index shall be adjusted to the figure that would have been arrived at had the manner of computing the Price Index in effect at the date of this Lease not been changed.

7. Upon commencement of the Additional Space Term, the Tenant's Proportionate Fraction as set forth in the Lease will be amended to 100%.
8. The provisions of Paragraph 10.11 of the Lease shall include reference to the Additional Space Annual Fixed Rent Rate in determining the "Security Deposit Amount" as the same may be adjusted. Upon commencement of the Additional Space Term, the Tenant shall increase the Security Deposit Amount by an amount equal to one (1) year Additional Space Annual Fixed Rent plus additional amounts, if any, as set forth in paragraph 10.11 as amended. The Security Deposit Amount shall be adjusted as provided in Section 10.11 by including the Additional Space Annual Fixed Rent Rate and other rental amounts due with respect to the Additional Space, as the same may be adjusted in accordance with Section 4.1(b), Section 4.1(c), Section 10.12, Section 10.13 and Section 10.14 of the Lease as amended. The additional Security Deposit Amount may be in the form of a Letter of Credit in the form of Exhibit L to the Lease and must be delivered on the commencement of the Additional Space Term.
9. Upon tenant's reasonable request and subject to availability on the lot upon which the Building is situated, Landlord shall provide additional surface parking spaces to Tenant on a tenancy-at-will basis for an additional charge of \$75.00 per space per month.
10. Landlord acknowledges that Tenant presently intends to reconfigure the Additional Space upon taking occupancy. The process for such reconfiguration of the Additional Space shall be in accordance with paragraph 3.3 of the Lease. However, Tenant shall be under no obligation to reconfigure the Additional Space.
11. Exhibit I of the Lease is hereby replaced with Exhibit "I" attached hereto.

All capitalized terms used herein shall have the same meaning as set forth in the Lease.

Except as otherwise expressly set forth herein, all other terms of the Lease shall apply to the Additional Space, are hereby ratified and confirmed and shall remain unchanged and in full force and effect.

Executed this 13th day of June, 1997.

LANDLORD

By: \_\_\_\_\_ /S  
David E. Clem, Trustee as aforesaid and not individually

By: \_\_\_\_\_ /S  
David M. Roby, Trustee as aforesaid and not individually

TENANT:  
VERTEX PHARMACEUTICALS INCORPORATED

By: \_\_\_\_\_  
Name:  
Title:

Executed this 13th day of June, 1997.

LANDLORD

By: \_\_\_\_\_  
David E. Clem, Trustee as aforesaid and not individually

By: \_\_\_\_\_  
David M. Roby, Trustee as aforesaid and not individually

TENANT:  
VERTEX PHARMACEUTICALS INCORPORATED

By: \_\_\_\_\_ /s/  
Name: Richard H. Aldrich  
Title: Senior Vice President

EXHIBIT A

TENANT AREA TWO EQUALS ADDITIONAL SPACE

[Drawings Follow]

EXHIBIT B

PLAN ENTITLED MILLENNIUM PHARMACEUTICAL INC.  
FORT WASHINGTON RESEARCH CENTER  
40 ERIE STREET, CAMBRIDGE, MA 02139  
INCORPORATING BASE BUILDING RENOVATIONS  
STAGE II & MILLENNIUM TENANT FIT-OUT  
FINAL GMP/CONSTRUCTION SET ISSUED 1/7/97

SECOND FLOOR ADDITION PLAN

[DRAWING FOLLOWS]

This OPTION AGREEMENT is entered into this 12th day of June, 1997, by and between David E. Clem and David M. Roby, Trustees of Fort Washington Realty Trust under Declaration of Trust dated June 19, 1995, and recorded in the Middlesex South District Registry of Deeds in Book 25422, Page 360 (the "Owner") with an address c/o of Lyme Timber Company, On the Common, P.O. Box 266, Lyme, New Hampshire 03768, and Vertex Pharmaceuticals Incorporated ("Vertex") with an address of 40 Erie Street, Cambridge, Massachusetts 02139.

WHEREAS, Owner intends to construct a parking garage (the "Garage") upon its property located at 47 Erie Street, Cambridge, Massachusetts.

WHEREAS, Vertex is (i) currently a tenant in the building owned by Owner located at and known as 40 Erie Street, Cambridge, Massachusetts under a lease dated March 3, 1995, as amended (the "Lease") and (ii) the future Tenant at 40 Erie Street, Cambridge, Massachusetts, of Additional Space as that term is defined in a Second Amendment to Lease of even date herewith between Owner and Vertex.

WHEREAS, Vertex has requested and Owner is willing to grant an option to Vertex to lease fifty (50) enclosed parking spaces (the "Spaces") in the Garage subject to the terms and conditions set forth herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, Owner and Vertex agree as follows:

1. Commencing on the date of this Option Agreement and expiring on the commencement of the Additional Space Term (the "Option Period"), and provided Vertex is not in default under the Lease, Vertex shall have an option (the "Option") to lease the Spaces from Owner or its successor in interest.

2. Vertex may exercise the Option at any time during the Option Period by giving written notice to Owner or its successor at the address set forth above.

3. Within a reasonable period of time after Owner is in receipt of Vertex's notice of exercise of the Option, Owner shall notify Vertex of the monthly rental (the "Rent") to be charged for the Spaces, which monthly rental may include a schedule of incremental rental increases not to exceed one increase per year of the Parking Space Term as hereinafter defined, which shall be at Fair Market Rate as determined by Owner.

(a) Within ten (10) days after Vertex receives notice of the Fair Market Rate to be charged for the Spaces from Owner, Vertex shall notify Owner of its agreement with or objection to Owner's determination of the Fair Market Rate, whereupon the Fair



Market Rate shall be determined by arbitration conducted in the manner set forth below. If Vertex does not notify Owner within such ten (10) day period of Vertex's agreement with or objection to Owner's determination of the Fair Market Rate, then the Fair Market Rate for the Spaces shall be deemed to be Owner's determination of the Fair Market Rate as set forth in the notice from Owner described in this subsection.

(b) If Vertex notifies Owner of Vertex's objection to Owner's determination of Fair Market Rate under the preceding subsection, such notice shall also set forth a request for arbitration and Vertex's appointment of a commercial real estate broker having at least ten (10) years' experience in the commercial leasing market in the City of Cambridge, Massachusetts (an "Arbitrator"). Within five (5) days thereafter, Owner shall by notice to Vertex appoint a second Arbitrator. Each Arbitrator shall be instructed to determine the Fair Market Rate for the applicable Additional Space Extension Period within thirty (30) days after Owner's appointment of the second Arbitrator. On or before the expiration of such thirty (30) day period, the two Arbitrators shall confer to compare their respective determinations of the Fair Market Rate. If the difference between the amounts so determined by the two Arbitrators is less than or equal to ten percent (10%) of the lower of said amounts then the final determination of the Fair Market Rate shall be equal to the average of said amounts. If such difference between said amounts is greater than ten percent (10%), then the two arbitrators within ten (10) days thereafter shall appoint a third Arbitrator (the "Third Arbitrator"), who shall be instructed to determine the Fair Market Rate for the applicable Additional Space Extension Period within ten (10) days after his appointment by selecting one of the amounts determined by the other two Arbitrators. Each party shall bear the cost of the Arbitrator selected by such party. The cost for the Third Arbitrator, if any, shall be shared equally by Owner and Vertex.

4. Occupancy of the Spaces and the payment of the Rent shall commence no later than the commencement of the Additional Space Term and shall continue until the expiration of the term of the Lease (as may be extended in accordance with the terms of the Lease), for Vertex's Additional Space at 40 Erie Street as defined the Lease (the "Parking Space Term").

5. The parties agree to memorialize the Commencement Date of the Parking Space Term.

6. Notwithstanding the foregoing, none of the terms set forth herein or the existence of this Option Agreement shall create an obligation on the part of Owner to construct the Garage.

7. Unless otherwise set forth herein, all capitalized terms used herein shall have the same meaning as set forth in the Lease and Second Amendment to Lease referred to herein.

Executed as of the date first above written.

FORT WASHINGTON REALTY TRUST

/S

-----  
By: David E. Clem, Trustee aforesaid and not individually

/S

-----  
By: David M. Roby, Trustee as aforesaid and not individually

VERTEX PHARMACEUTICALS INCORPORATED

BY

Name:  
Title:

Executed as of the date first above written.

FORT WASHINGTON REALTY TRUST

By:  
David E. Clem, Trustee as aforesaid and not individually

By:  
David M. Roby, Trustee as aforesaid and not individually

VERTEX PHARMACEUTICALS INCORPORATED

By: \_\_\_\_\_ /S  
-----  
Name: Richard H. Aldrich  
Title: Senior Vice President

EXHIBIT 21

Subsidiaries of the Registrant

Altus Biologics Inc. (incorporated in Massachusetts)

Vertex Securities Corp. (incorporated in Massachusetts)

Vertex Pharmaceuticals (Europe) Limited (incorporated in England)

CONSENT OF INDEPENDENT ACCOUNTANTS

We consent to the incorporation by reference in the Registration Statement of Vertex Pharmaceuticals Incorporated on Form S-8 (File Nos. 33-48030, 33-48348, 33-65742, 33-93224, 33-12325 and 333-27011) of our report dated February 23, 1998 on our audits of the consolidated financial statements of Vertex Pharmaceuticals Incorporated, as of December 31, 1997 and 1996, and for years ended December 31, 1997, 1996 and 1995, which report is included in this annual report on Form 10-K.

Coopers & Lybrand L.L.P.

Boston, Massachusetts  
March 26, 1998



THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE COMPANY'S ANNUAL REPORT ON FORM 10-K FOR FISCAL YEAR ENDED DECEMBER 31, 1997 AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

1,000  
U.S. DOLLARS

YEAR		
DEC-31-1997		
JAN-01-1997		
DEC-31-1997	1.0	71,454
	208,217	0
	0	0
	281,623	34,720
	23,625	
	295,604	
13,698		0
0		0
		252
	275,749	
295,604		0
	43,799	0
	63,054	
	0	
	576	
	(19,831)	0
	0	0
	0	0
	(19,831)	0
	(0.82)	
	(0.82)	