SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

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

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2000
COMMISSION FILE NUMBER 000-19319

VERTEX PHARMACEUTICALS INCORPORATED

(Exact name of registrant as specified in its charter)

MASSACHUSETTS (State of incorporation)	04-3039129 (I.R.S. Employer Identification No.)
130 WAVERLY STREET CAMBRIDGE, MASSACHUSETTS (Address of principal executive offices)	02139-4242 (Zip Code)

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

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 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes _X_ No ___

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 12, 2001 there were outstanding 60,150,471 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 $1,887,463,000.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement for the 2001 Annual Meeting of Stockholders to be held on May 8, 2001 are incorporated by reference into

Part III.

FORM 10-K INDEX

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

All share and per share data in this Report give effect to the 2-for-1 stock split that we effected as a stock dividend on August 23, 2000.

FORWARD-LOOKING STATEMENTS

Our disclosure in this Annual Report on Form 10-K contains some forward-looking statements. Forward-looking statements give our current expectations or forecasts of future events. You can identify these statements by the fact that they do not relate strictly to historical or current facts. Such statements may include words such as "anticipate," "estimate," "expect," "project," "intend," "plan," "believe" and other words and terms of similar meaning in connection with any discussion of future operating or financial performance. In particular, these statements include, among other things, statements relating to:

- our business strategy;

- our predicted development and commercial timelines;

- the development of our products;

- the establishment and development of collaborative partnerships;

- our ability to identify new potential products; - our ability to achieve commercial acceptance of our products;

- our ability to scale-up our manufacturing capabilities and facilities;

- the potential for the acquisition of new and complementary technologies;

- our projected capital expenditures; and

- our liquidity.

Any or all of our forward-looking statements in this report may turn out to be wrong. They can be affected by inaccurate assumptions we might make or by known or unknown risks and uncertainties. Many factors mentioned in our discussion in this report will be important in determining future results. Consequently, no forward-looking statement can be guaranteed. Actual future results may vary materially.

We provide a cautionary discussion of risks and uncertainties under "Risk Factors" in Item 1 of this Report. These are factors that we think could cause our actual results to differ materially from expected results. Other factors besides those listed there could also adversely affect us.

PART I

ITEM 1. BUSINESS

We are a biotechnology company that seeks to discover, develop and commercialize novel small molecule drugs that address significant markets with major unmet medical needs, including the treatment of viral diseases, cancer, autoimmune and inflammatory diseases, and neurological disorders. Our drug design platform integrates advanced biology, chemistry, biophysics and information technologies to make the drug discovery process more efficient and productive. To date, we have discovered and advanced one product that has reached the market--the HIV protease inhibitor Agenerase-Registered Trademark- (amprenavir)--and we have 12 additional drug candidates in development.

We intend to commercialize some of our products independently and some with partners. We have significant collaborations with Aventis, Eli Lilly, GlaxoSmithKline, Kissei, Novartis, Schering AG (Germany), Serono and Taisho. These collaborations provide us with financial support and other valuable resources for our research programs, development of our clinical drug candidates, and marketing and sales of our products. We believe that we are positioned to commercialize multiple products in the coming years, which we expect will generate increased milestone payments, product revenues and royalty payments. We have additional research programs underway, and novel Vertex drug candidates targeting bacterial gyrase, specific kinases, caspases, and hepatitis C virus (HCV) protease could enter preclinical studies within the next 12 months. These drug candidates may have application in the treatment of bacterial infection, cancer, inflammation, and neurological disease, and HCV infection.

We believe that the emergence of large amounts of information from genomic research represents an unprecedented opportunity for drug discovery directed at novel biological targets. Chemogenomics, our proprietary, systematic, genomics-based platform, is designed to speed drug discovery as well as to expand intellectual property coverage of drug candidate compounds and classes of related compounds. As part of this approach, we are pursuing a strategy of parallel drug design directed at gene families, which are groups of genes with similar sequences that code for structurally similar proteins. Using this strategy, we seek to identify classes of chemical inhibitors (drug-like molecules) that are applicable for clusters of closely related targets that have different biological functions. We believe that chemogenomics will enhance the speed and productivity of drug design efforts directed at novel biological targets, secure for us valuable intellectual property in gene families of interest, and ultimately result in the market introduction of major new drugs.

We are presently applying our expertise in chemogenomics to focus on the protein kinase and caspase gene families, two areas in which we believe we can leverage our drug design expertise to create product candidates that address a variety of sizable therapeutic indications. In May 2000, we entered into a collaboration with Novartis which will provide us up to $800 million in pre-commercial payments to discover, develop and commercialize up to eight kinase inhibitors for the treatment of a range of diseases, including cancer, cardiovascular diseases, and inflammatory diseases. The financial and technological support provided by Novartis enables us to expand both our infrastructure and our chemogenomics efforts in the protein kinase gene family. In addition, we have begun exploring other gene families. We anticipate establishing additional partnerships with major pharmaceutical companies in order to obtain the funding and resources needed to expand our discovery efforts in additional gene families.

Over the next few years, we expect to continue our research and development efforts and to bring drug candidates through late stage clinical development and into commercialization. We also expect to license and acquire technologies, resources and products that have the potential to strengthen our drug discovery platform, product pipeline and commercial capabilities.

MARKETED AND DEVELOPMENT STAGE PRODUCTS

Our first product, Agenerase, received accelerated approval from the FDA in April 1999 and was launched in May 1999. Agenerase, which was designed by Vertex, is marketed in the United States by GlaxoSmithKline. We co-promote Agenerase in the United States and in key E.U. countries. Total sales of the drug for the twelve months ended December 31, 2000 were $79.3 million, resulting in $12.0 million in product sales and royalty revenue to Vertex.

Agenerase is the first of many Vertex-discovered products that we intend to commercialize, by ourselves and with partners, in the coming years. The accompanying chart describes our product pipeline. One of our drug candidates in development is presently in Phase III clinical development, six are presently in Phase II clinical development, one is presently in Phase I clinical development, four are in preclinical development.

DRUG	CLINICAL INDICATIONS	PHASE	COMPANY WITH MARKETING RIGHTS (REGION)	ESTIMATED U.S. PATIENT POPULATION (MILLIONS)
INFECTIOUS DISEASE				
VX-175	HIV	III	GlaxoSmithKline (Worldwide except Far East); Vertex co-promote (U.S. and E.U.); Kissei (Japan)*	0.9
VX-497 (merimempodib)	Chronic hepatitis C	II	Vertex (Worldwide)	2.7
CANCER				
Incel-TM-	Multidrug resistant solid tumor cancers	II	Vertex (Worldwide)	0.5 (tumor incidence in target diseases)
VX-853	Multidrug resistant solid tumor cancers	I/II	Vertex (Worldwide)	0.5 (tumor incidence in target diseases)
INFLAMMATION AND AUTOIMMUNE DISEASE				
VX-740 (pralnacasan)	Rheumatoid arthritis (RA); inflammatory diseases	II	Aventis (Worldwide); Vertex co-promote (U.S. and E.U.)	2.1 (RA)
VX-745	RA; inflammatory diseases	II	Kissei (Japan) Vertex (R.O.W.)	2.1 (RA)
VX-148	Autoimmune diseases	I	Vertex (Worldwide)	NA
VX-944	Autoimmune diseases	Preclin	Vertex (Worldwide)	NA
VX-850	Inflammatory diseases	Preclin	Kissei (Japan)*; Vertex (R.O.W.)	NA
VX-702	Inflammatory diseases	Preclin	Kissei (Japan); Vertex (R.O.W.)	NA
VX-765	Inflammatory diseases	Preclin	Vertex (Worldwide)	NA
NEUROLOGICAL DISEASE				
Timcodar (VX-853)	Diabetic neuropathy	II	Schering AG (E.U.; profit sharing in U.S.)*	1.3

* Development option

RESEARCH PROGRAMS

We have several research programs underway at the discovery stage, including multitarget programs that are representative of our chemogenomics approach, as well as single target programs. We expect to advance numerous drug candidates into development in the next several years that are based on this ongoing research.

MOLECULAR TARGET	CLINICAL INDICATIONS	COMPANY WITH MARKETING RIGHTS (REGION)
Caspases	Neurological diseases; cardiovascular diseases	Taisho (Japan); Serono(R.O.W.); Vertex joint venture (North America)
Kinases	Cancer; inflammatory diseases; neurodegenerative diseases	Novartis (Worldwide); Vertex co-promote (U.S. & E.U.)
HCV protease	Hepatitis C	Eli Lilly (Worldwide); Vertex co-promote (U.S.)
HCV helicase	Hepatitis C	Vertex (Worldwide)
Bacterial DNA gyrase B	Bacterial infections	Vertex (Worldwide)

COMMERCIAL PRODUCT AND CLINICAL DEVELOPMENT PROGRAMS

We have one product on the market and eight additional drug candidates in clinical development to treat viral diseases, cancer, autoimmune and inflammatory diseases and neurological disorders.

ANTIVIRAL PROGRAMS

HIV/AIDS PROGRAM

AGENERASE

Our first marketed product is Agenerase (amprenavir), an orally deliverable drug for the treatment of HIV infection and AIDS. A second generation HIV protease inhibitor, Agenerase was developed by us in collaboration with GlaxoSmithKline. We used our expertise in structure-based drug design to create and develop Agenerase to address unmet needs in the treatment of HIV. GlaxoSmithKline is marketing Agenerase worldwide except for the Far East. We co-promote Agenerase in the U.S. and Europe. Agenerase received regulatory approval in the U.S. in April 1999, and it has also been approved in the 15 member states of the European Union, as well as Argentina, Brazil, Colombia, Chile, Ghana, Israel, Latvia, Malawi, Mexico, Switzerland, Uruguay, and other countries. In Japan, we collaborated with Kissei Pharmaceutical Co., Ltd. in the development of amprenavir, which is sold by Kissei under the trade name Prozei-TM-. We receive royalties on sales of amprenavir by GlaxoSmithKline and Kissei. We also supply amprenavir bulk drug substance to Kissei. More than 16,000 patients in the U.S. take Agenerase as part of combination therapy for the treatment of HIV. Agenerase's share of the HIV protease inhibitor prescriptions in the U.S. was approximately 8% as of December 31, 2000.

To support the use of Agenerase in the marketplace, GlaxoSmithKline has undertaken a broad Phase IV clinical program aimed at evaluating the drug's use as part of different drug combinations in a variety of patient populations. In collaboration with GlaxoSmithKline, we have initiated several of our own post-marketing clinical studies.

Kissei received approval for amprenavir under a special fast-track initiative by the Ministry of Health and Welfare in Japan in September 1999. Amprenavir's market launch as Prozei followed shortly thereafter. As a condition of accelerated approval, Kissei is conducting a Phase II/III clinical trial of amprenavir.

We believe that Agenerase is distinguished from other protease inhibitors by its:

- longer half-life, which allows for convenient twice-daily dosing and provides high levels of the drug in the bloodstream;

- ability to be dosed effectively with or without food, providing convenience for patients; and

- lower levels of cross-resistance to other protease inhibitors.

Preliminary data have shown that Agenerase is less associated with high cholesterol and triglyceride levels, and less associated with syndromes of fat redistribution than have been reported for other anti-HIV drugs. Further study will be required to confirm these preliminary data and to understand more fully the clinical significance of Agenerase's resistance profile. Combination studies of Agenerase and the protease inhibitor ritonavir presented at major medical conferences, including the 8th Conference on Retroviruses and Opportunistic Infections in Chicago in February 2001, have suggested that ritonavir significantly boosts levels of Agenerase in the bloodstream in both once daily and twice daily dosing regimens. Co-administration with ritonavir has become progressively more frequent in clinical practice, as a strategy of achieving maximum antiviral activity, reducing the likelihood of treatment failure (viral breakthrough), and lowering the overall pill count for patients. More than 50% of Agenerase use in the United States is in combination with ritonavir as of December 2000.

VX-175

We are developing a second HIV protease inhibitor, VX-175 (also known as GW433908) as part of the GlaxoSmithKline collaboration. In November, VX-175 began two Phase III trials, including one trial that is evaluating VX-175 in a once-daily dosing combination with ritonavir. VX-175 is a prodrug of the HIV protease inhibitor amprenavir that is designed to provide more compact dosing for patients. A prodrug is an inactive compound that is changed metabolically by the body to become active against disease. VX-175 was synthesized first at Vertex and then selected for development by GlaxoSmithKline. With the number of pills that HIV infected patients require daily as part of combination drug regimens, the prodrug's dosing benefit could provide a material increase in physician acceptance of and patient compliance with this product as compared to Agenerase.

A Phase II clinical study of VX-175 was completed in 2000, and results were presented at the 8th Conference on Retroviruses and Opportunistic Infections in February 2001. Phase II study results showed that VX-175 possesses potent antiviral activity and a strong pharmacokinetic and safety profile. Preclinical studies and Phase I studies found that administration of VX-175 delivered amprenavir, the active ingredient of Agenerase, and also showed dose-proportionality. The FDA has given VX-175 fast track designation. Fast track designation is granted to products that may provide a significant improvement in the safety or effectiveness of the treatment for a serious or life-threatening disease. GlaxoSmithKline is developing the prodrug and has marketing rights in the United States, Europe and certain countries of the Far East. Kissei has an option to develop and commercialize the prodrug in Japan. We have an option to co-promote the prodrug in the United States and the E.U., and we will receive royalties on sales of VX-175, if any. We also retain rights to supply bulk drug substance to GlaxoSmithKline.

BACKGROUND: HIV/AIDS

Infection with the HIV virus leads to AIDS, a severe, life-threatening impairment of the immune system. The World Health Organization (WHO) estimates that approximately 33.6 million persons worldwide, including approximately 920,000 patients in North America, are infected with HIV.

Protease inhibitors (PIs) are used as part of combination regimens for the treatment of HIV. PIs block the cleavage of HIV polyproteins into active proteins, and result in the production of non-infectious viral particles. Currently, more than 208,000 of the HIV patients receiving drug treatment in the U.S. take at least one PI. The market for HIV PIs is highly competitive, with five

different PIs vying for a share of an almost $1 billion U.S. market. Worldwide sales of HIV PIs were an estimated $2.2 billion in 1999, compared to $1.8 billion in 1998.

There are now three classes of antiviral drugs approved for the treatment of HIV infection and AIDS: nucleoside reverse transcriptase inhibitors (NRTIs), such as AZT and 3TC; non-nucleoside reverse transcriptase inhibitors (NNRTIs), such as nevarapine; and PIs, including Agenerase. In the United States, more than 16,000 patients take Agenerase as part of combination therapy for the treatment of HIV infection.

HEPATITIS C VIRUS (HCV) INFECTION

IMPDH PROGRAM

Vertex is developing novel, orally administered inhibitors of the enzyme inosine 5'-monophosphate dehydrogenase (IMPDH), targeting the treatment of both viral and autoimmune diseases. We retain all commercial rights to VX-497 and any second generation compounds resulting from our IMPDH research and development program.

Our lead compound, VX-497, has demonstrated potent biological activity and oral bioavailability in preclinical and early clinical studies. Data from a Phase I trial in healthy volunteers, completed in 1998, show that VX-497 is well-tolerated in single escalating doses and achieves blood levels well above those necessary to achieve potent inhibition of IMPDH IN VITRO. In November 1999, we announced preliminary data from a Phase II clinical trial of VX-497 indicating that VX-497, when given as monotherapy to HCV patients who were unresponsive to prior treatment with interferon-alpha, was well tolerated and appears to reduce levels of serum alanine aminotransferase, a marker of liver inflammation, in HCV patients treated for 28 days.

We have now completed a preliminary analysis of a Phase II study of VX-497 combined with interferon-alpha in patients with HCV infection who have not previously received antiviral treatment. This double-blind, placebo-controlled study began in June 2000. The preliminary results indicate that further clinical development of VX-497 is warranted. A kinetic analysis of viral decline showed that the VX-497 treated patients had an accelerated decline in both the fast and slow phases of viral reduction. This is consistent with an additive antiviral effect mediated by VX-497, when given in combination with interferon alpha. We expect that our next clinical study will investigate VX-497 in combination with Pegylated (PEG) interferon-alpha. We believe that PEG interferon-alpha will soon become the standard of care in the treatment of HCV, either alone or in combination with other drugs, such as ribavirin. VX-497 may have certain safety advantages compared with ribavirin, which is approved for use in combination with interferon-alpha for the treatment of HCV. Ribavirin has been associated with the side effect of hemolytic anemia. The majority of ribavirin treated patients experience a drop in hemoglobin levels, and a significant fraction require dose reduction or withdrawal of therapy.

In 2000, we advanced two additional IMPDH inhibitors, VX-148 and VX-944, into preclinical development, targeting antiviral and autoimmune indications. VX-148 and VX-944 are chemical compounds structurally distinct from VX-497. One of these agents, VX-148, began a Phase I clinical study in December 2000. More information on VX-148 and VX-944 is available in the section titled "Autoimmune Diseases"

BACKGROUND: IMPDH AND HCV

Cells require adequate nucleotide levels to sustain RNA and DNA synthesis. Nucleotides can be made available for nucleic acid synthesis via two distinct pathways, the "salvage pathway" and "DE NOVO synthesis." Using the salvage pathway, cells recycle nucleosides derived from breakdown of nucleic acids, whereas with DE NOVO synthesis the purine or pyrimidine ring systems of the nucleotides are assembled in a stepwise manner. The enzyme inosine 5'-monophosphate dehydrogenase (IMPDH) catalyzes an essential step in the DE NOVO biosynthesis of guanine nucleotides, namely the conversion of inosine 5'-monophosphate (IMP) to xanthosine 5'-monophosphate (XMP).

Different cell types rely on these two pathways of nucleotide biosynthesis to varying degrees. Cells that proliferate relatively rapidly, such as lymphocytes and virus-infected cells, rely more on the de novo pathway because they require more nucleotides than can be provided by the salvage pathway. This observation makes enzymes of the de novo pathway an attractive target for pharmacological intervention aimed at selectively inhibiting proliferation of such cells.

CANCER

MDR PROGRAM

We are developing novel compounds to treat and prevent the occurrence of drug resistance associated with the failure of cancer chemotherapy. Incel (also referred to as biricodar dicitrate or VX-710), our lead compound, blocks major multidrug resistance (MDR) mechanisms, including P-glycoprotein, or P-gp, and multidrug resistance associated protein, or MRP. P-gp and MRP are proteins that are overexpressed on the cell surface of many different tumor types that can prevent the effectiveness of chemotherapy by actively pumping out cytotoxic agents from within the cancer cell. Incel is designed to block these molecular pumps, allowing chemotherapy to affect the targeted tumor. Incel, an intravenous compound, is intended to be administered in combination with cancer chemotherapy agents, such as doxorubicin, paclitaxel, vincristine, etoposide and mitoxantrone. We have completed Phase II clinical trials of Incel in ovarian, breast, small cell lung and prostate cancers and in soft tissue sarcoma. An exploratory study has also been conducted in liver cancer. In addition, we have conducted a Phase I/II clinical trial of the compound VX-853, an oral MDR inhibitor, in patients with solid tumors. We retain all commercial rights to Incel worldwide.

Our development strategy has been to evaluate Incel in a broad range of tumor types in combination with widely used anti-cancer

agents. The objective of these Phase II trials is to assess Incel's safety and pharmacokinetics and identify the tumor type, drug and dosage regimens to be studied further in Phase III clinical trials. Incel is being evaluated in combination with doxorubicin and paclitaxel, two of the most widely used anti-cancer agents, as well as with mitoxantrone, prednisone and vincristine. Historical response rates of patients who have failed first-line chemotherapy (refractory patients) who attempt chemotherapy a second time are low. Analysis of data using Incel in conjunction with chemotherapy demonstrates that use of Incel in combination with a chemotherapeutic agent can induce objective tumor responses (> 50% tumor shrinkage) in a subset of patients resistant to therapy with the chemotherapeutic agent alone. We have treated more than 250 patients as part of clinical trials of Incel. We are now seeking a collaborative partnership to develop and commercialize Incel.

A second compound, VX-853, has been optimized by Vertex for oral administration. IN VITRO results show that VX-853 potently blocks MDR mediated by both P-gp and MRP. We have completed a Phase I/II clinical trial with VX-853 to assess the safety and pharmacokinetics of the compound in combination with doxorubicin. This study demonstrated that the combination is well tolerated, and that VX-853 does not affect the pharmacokinetics of doxorubicin.

BACKGROUND: MDR

The American Cancer Society estimates that during 2000 more than
1.2 million people in the United States were diagnosed with invasive cancer and more than 550,000 people in the U.S. died from such cancers. A significant number of these patients failed to respond or relapsed following chemotherapy because of MDR.

A major contributing factor to MDR is the presence of molecular pumps, including P-gp and MRP, that expel chemotherapeutic agents from cancer cells, preventing the sustained delivery of the potent levels of the chemotherapeutic agents required for therapeutic benefit. As a consequence, these resistant tumor cells cannot be killed efficiently by anticancer drugs such as doxorubicin, vincristine, etoposide and paclitaxel. P-gp has been associated with 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 has been identified as another drug efflux pump and is also associated with resistance.

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 cyclosporin A, have been shown in preliminary human studies to have some promise for overcoming clinical resistance to certain commonly used chemotherapeutic agents. We believe that these drugs affect only a subset of the MDR pumps and may have side effects that could limit broad use. Second generation multidrug reversing agents, such as PSC 833 (valspodar), a cyclosporine derivative, are also currently being evaluated by other companies.

INFLAMMATORY AND AUTOIMMUNE DISEASES

INFLAMMATORY DISEASE

INTERLEUKIN-1 BETA CONVERTING ENZYME (ICE; CASPASE-1) PROGRAM

We are conducting research and development on inhibitors of interleukin-1 beta converting enzyme (ICE; caspase-1) for the treatment of acute and chronic inflammatory conditions, including rheumatoid arthritis. We are collaborating with Aventis S.A. in the development of the lead ICE inhibitor compound pralnacasan (VX-740). Aventis has completed a Phase II clinical trial of pralnacasan in patients with rheumatoid arthritis. Inhibitors of ICE may have application to a wide range of chronic and acute inflammatory diseases, such as rheumatoid arthritis, osteoarthritis, inflammatory bowel disease, atherosclerosis, sepsis, and pancreatitis. We expect Aventis to initiate more comprehensive Phase II trials in rheumatoid arthritis in 2001. We expect that Aventis will initiate clinical trials in additional indications within the next 1-2 years.

In 1999 we entered into an agreement under which Aventis holds an exclusive worldwide license to develop, manufacture and market pralnacasan in any indication, as well as an exclusive option for all other compounds discovered under our previous research collaboration with Aventis. As part of the agreement, Aventis may pay us up to $62 million for the development of pralnacasan in rheumatoid arthritis, the first targeted indication, and Aventis will pay for all development costs. Development of pralnacasan in two additional indications could result in an additional $144 million in pre-commercial payments. Aventis has completed a Phase II clinical trial of pralnacasan in patients with rheumatoid arthritis which began in September 1999. The primary goal of the study was to evaluate the safety and pharmacokinetics of multiple doses of pralnacasan in rheumatoid arthritis patients. A Phase I clinical trial of the compound, completed by Aventis earlier in 1999, showed that the compound was well-tolerated in humans in a range of single doses.

We have continued research into second generation ICE inhibitors, as well as other caspase inhibitors. In 2000, we advanced VX-765, an ICE inhibitor representing a distinct chemical class, into preclinical development. We hold worldwide rights to compounds emerging from our second generation ICE inhibitor research program.

BACKGROUND: ICE INHIBITORS FOR INFLAMMATORY DISEASE

ICE (caspase-1) is an enzyme that controls the release of active Interleukin-1 (IL-1) beta (one of two forms of IL-1) and IL-18 from white blood cells into the bloodstream and within tissues. IL-1 beta and IL-18 are a cytokines that mediate a wide range of immune and inflammatory responses in many cell types. Early in the inflammatory process, IL-1 beta is released from white blood cells, initiating a complex cascade of events that results in inflammation and tissue damage. IL-18 is an important factor in the activation of lymphocytes. Elevation of IL-1 beta and IL-18 levels has been correlated to disease state in a number of acute and chronic inflammatory diseases.

Rheumatoid arthritis is the lead indication of the pralnacasan development program. In patients with rheumatoid arthritis, increased activity of IL-1 beta and IL-18 is seen in joint tissues during disease flare-ups, and IL-1 beta and IL-18 are known to activate osteoclasts, a cell type important in

bone erosion characteristic of rheumatoid arthritis. In mice in which arthritis is induced by collagen immunization, treatment with pralnacasan significantly reduces the severity of arthritis compared to vehicle-treatment.

There are more than six million patients with rheumatoid arthritis worldwide, including approximately 2.1 million in the United States. The main drugs used to treat rheumatoid arthritis are non-steroidal anti-inflammatory drugs (NSAIDs) such as Motrin (ibuprofen) and Celebrex (celecoxib). These drugs are palliative--they relieve pain and swelling but do not reverse or prevent the progression of the disease. Methotrexate is a disease-modifying drug that is widely used, but its use is associated with side effects that include bone marrow suppression and liver toxicity. Even when tolerated well, over the long term many patients become unresponsive to methotrexate. Newer therapies including Enbrel (etanercept) and Remicade (infliximab) provide a strong rationale for a new kind of disease modifying therapy that involves inhibition of the cytokine tumor necrosis factor (TNF) alpha. However, both Enbrel and Remicade are injectable, and therefore we believe that an oral cytokine inhibitor such as pralnacasan has significant dosing advantages.

Vertex and Aventis scientists began collaborating in 1993 to discover and develop orally available inhibitors of ICE. Our design efforts were based on the three-dimensional atomic structure of ICE, which was solved by Vertex researchers in 1994. As the result of an extensive, jointly conducted synthesis and research program, pralnacasan was selected as a development candidate in 1997. Pralnacasan is the first caspase inhibitor to be advanced to Phase II clinical trials.

P38 MAP KINASE PROGRAM

We are collaborating with Kissei on the design, development and commercialization of inhibitors of p38 MAP kinase. In early 2001, we began a Phase II trial of our lead drug candidate, VX-745, in approximately 135 patients with rheumatoid arthritis. VX-745 is a novel orally administered investigational drug targeting p38 MAP kinase. In 2000, we completed a pilot Phase II clinical trial with VX-745 in 12 patients with rheumatoid arthritis. The p38 MAP kinase is a human enzyme involved with the onset and progression of inflammation and apoptosis, or programmed cell death. The enzyme plays a central role in regulating the cytokines TNF alpha and IL-1 beta. The objective of our research collaboration with Kissei is to identify and extensively evaluate compounds that target p38 MAP kinase to develop novel, orally active drugs for the treatment of inflammatory diseases, such as rheumatoid arthritis, asthma, and Crohn's disease, certain hematologic disorders, congestive heart failure, and neurological diseases such as stroke.

During 1998, Vertex and Kissei selected VX-745 as a lead drug development candidate targeting p38 MAP kinase. We conducted a Phase I clinical trial of the compound in healthy volunteers in early 1999. Based on the results of that study, we conducted an exploratory Phase II trial in rheumatoid arthritis patients in Europe starting in 1999. This 28-day study tested the tolerability and pharmacokinetics of VX-745 in 12 patients with rheumatoid arthritis. The trial also assessed the pharmacodynamic activity of VX-745, and clinical disease activity markers were monitored. The results of this trial support further development of this compound.

In 2000, we advanced two additional p38 MAP kinase inhibitors, VX-850 and VX-702, into preclinical development, targeting inflammatory, neurological and cardiovascular indications. Both VX-850 and VX-702 represent chemical classes that are distinct from VX-745.

BACKGROUND: P38 INHIBITORS FOR INFLAMMATORY DISEASE

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. When activated, the p38 MAP kinase triggers production of the cytokines IL-1, tumor necrosis factor TNF-alpha, and IL-6. Excess levels of IL-1 and TNF-alpha are associated with a broad range of acute and chronic inflammatory diseases. We believe that an oral cytokine inhibitor such as VX-745 has significant dosing advantages over other available therapies.

Excess TNF alpha and IL-1 levels also play an important role in programmed cell death associated with ischemia and stroke, and possibly in neurodegenerative diseases such as Alzheimer's disease. We are aware of several other companies that are developing p38 MAP kinase inhibitors. In addition, there are other drugs, in development or approved, that have different mechanisms of action for treating rheumatoid arthritis and other inflammatory diseases.

AUTOIMMUNE DISEASES

IMPDH PROGRAM

Vertex is developing novel, orally administered inhibitors of the enzyme inosine 5'-monophosphate dehydrogenase (IMPDH), targeting the treatment of both viral and autoimmune diseases. In 2000, we designated the second-generation IMPDH inhibitors, VX-148 and VX-944, as drug development candidates. VX-148 and VX-944 are chemical compounds structurally distinct from VX-497. VX-148 began a Phase I clinical study in December 2000.

IMPDH is a validated target for immunosuppressive drug development as evidenced by the presence of two marketed drugs that function through the inhibition of this enzyme:

- Mycophenolate mofetil (MMF, or CellCept-Registered Trademark-), the prodrug ester of mycophenolic acid, has been developed and approved for the prevention of acute rejection in kidney, heart, and liver transplantation when used in combination with steroids and cyclosporin A (CsA).

- Mizoribine (Bredinin-Registered Trademark-) is approved in Japan for multiple indications, including prevention of rejection after renal transplantation, idiopathic glomerulonephritis, lupus nephritis, and rheumatoid arthritis.

Based on the broad role of IMPDH in the regulation of immune system activity, we believe that VX-148 has the potential to treat a wide variety of autoimmune diseases including such diseases as psoriasis, multiple sclerosis and rheumatoid arthritis. We anticipate initiation of a Phase II trial with VX-148 in psoriasis by the end of 2001.

NEUROLOGICAL DISEASES

TIMCODAR

Timcodar dimesylate (also referred to as VX-853) is a novel, orally administered drug that may be useful in the treatment of neurological disorders such as peripheral neuropathies (including diabetic neuropathy), Parkinson's Disease, trauma, and amyotrophic lateral sclerosis, or ALS. In addition to timcodar, we are conducting research to discover and develop drugs through our neurophilin ligand program. We have used an integrated drug design technique to synthesize a library of orally available small molecule compounds that have the potential to prevent nerve damage or improve recovery following nerve injury. We are engaged in a worldwide strategic partnership with Schering AG (Germany) for research, development and commercialization of neurophilin ligands for the treatment of a variety of neurological disorders. In 1999, we completed a Phase II clinical trial of timcodar in diabetic neuropathy patients. Schering AG has an option to co-develop timcodar with us under the collaboration agreement. We are evaluating novel testing approaches that have the potential to elucidate the clinical activity of timcodar in neuropathies. Working with leaders in the field of neuropathy, in January 2001 we began a clinical study with a novel trial design. This trial is designed to assess the activity of timcodar in a novel clinical paradigm.

During 1999, we announced that orally administered neurophilin compounds discovered at Vertex, including compounds that do not interact with FKBP-12, significantly improve outcome in two different preclinical models of Parkinson's Disease. We also reported for the first time that compounds that do not interact with FKBP-12 can improve outcomes in animal models of peripheral neuropathies. In 1999, we completed a Phase II clinical trial with timcodar demonstrating that the drug was well-tolerated and was orally bioavailable in the range of doses tested. A single-dose Phase I study of four different doses

of timcodar in healthy volunteers was completed in 1998, providing support for Phase II clinical development in the indication of diabetic neuropathy. IN VIVO results have shown that timcodar can prevent neural dysfunction in models of neuropathies. We continue to characterize the potential of timcodar and other neurophilin compounds in a variety of neurological disease models.

BACKGROUND: NEUROLOGICAL DISEASES

Neurodegenerative disorders are among the diseases with the fewest available effective treatments. Central nervous system disorders such as Alzheimer's Disease, Parkinson's Disease and multiple sclerosis affect millions of patients worldwide, and for some of these there are no approved therapies that alter the course of disease progression. Peripheral neuropathies encompass a wide spectrum of clinical syndromes for which treatments of only limited efficacy are available. Diabetic neuropathy is the most common identifiable cause of neuropathy. There are approximately 1.3 million patients with moderate to severe diabetic neuropathy in the United States.

Effective treatment of both central and peripheral neurological disorders has long been hampered by the inability to slow, arrest, or reverse nerve damage or progression. Other companies are developing various neurotrophic factors (proteins) for these indications, but we believe that their clinical utility is likely to be limited because of the difficulty of the delivery of protein drugs. Based on our extensive research in the field of immunosuppressive drugs, we have been able to generate a large number of compounds, known as neurophilin ligands, that improve outcomes in various models of neurological diseases. Extensive IN VITRO and IN VIVO studies conducted with a reference compound designed by Vertex support the broad potential of our neurophilin ligands in the treatment of degenerative central nervous system and peripheral nervous system diseases. Our researchers are still seeking to determine the mechanism of action of neurophilin ligands.

VERTEX DRUG DESIGN PLATFORM AND DRUG DISCOVERY STRATEGY

We believe that our integrated drug design approach, together with our strategy of parallel drug design in gene families, has provided us with the ability to discover and develop small molecule drugs directed at biologically complex targets, including novel targets identified in genomic research. Our approach has been validated through our collaborations and success in moving drug candidates into clinical trials.

INTEGRATED DRUG DESIGN APPROACH. Our drug design platform integrates biology, biophysics, chemistry and information technologies in a coordinated and simultaneous fashion throughout the discovery process to increase the speed and certainty of drug discovery and development. Early in the drug design process, we focus on qualities that are critical to the successful development of oral small molecules, including sufficient potency, oral bioavailability, adequate pharmacokinetics and safety. Our consistent achievement of these parameters in discovery efforts directed at biologically complex molecular targets has been a major reason for our high rate of productivity and success in competitive areas of drug discovery.

CHEMOGENOMICS PLATFORM AND PARALLEL DRUG DESIGN STRATEGY. Chemogenomics, the Company's proprietary, systematic, genomics-based platform, is designed to accelerate the discovery of new drugs and to expand intellectual property coverage of drug candidate compounds and classes of related compounds. Chemogenomics represents an intersection of medicinal chemistry with genomics--the organized pursuit of small molecule drugs directed at genomic targets. To date, using our integrated approach, we have been able to design multiple distinct lead classes of compounds for certain protein targets, and to identify many or all of the critical interactions that a compound must have in order to bind to these targets. In doing so, we have been able to design and file patent applications covering many of the possible drugs for selected protein targets. For example, in our caspase program, we have obtained a pharmacophore patent that we believe describes a large number of the possible ways of inhibiting caspase-1 with drug-like small molecules, and we believe that chemical scaffolds useful for caspase-1 inhibition may also be useful for inhibiting other targets in the caspase gene family.

The complete sequence of the human genome, which represents all of the genes that code for proteins in the human body, is now known. The number of human proteins that represent targets for currently marketed drugs is approximately 500. In the next several years, genomic and proteomic research is expected to reveal as many as 5,000 novel protein targets that represent promising points of therapeutic intervention with small molecule drugs. We believe that the traditional approach to drug discovery, which focuses on one target at a time, is not capable of exploiting efficiently this expected increase in the number of "druggable" targets.

To maximize productivity for drug discovery directed at novel protein targets, we are pursuing a strategy of parallel drug design in gene families. This approach applies our integrated strategy across groups of structurally similar targets to pursue rapid and simultaneous generation of lead compounds. Our goal is to use this approach to describe and patent many or all of the possible drug candidates for a protein target or a group of targets. Specifically, we are seeking to:

- design multiple lead classes of compounds that are applicable to clusters of structurally similar targets;

- leverage our knowledge of one target's active site to design inhibitor classes for related targets; and

- identify all of the critical interactions a compound must have to bind to a particular target, and use this information as a basis for obtaining patents that describe many or all of the possible drugs for a target or cluster of targets.

We believe that our integrated approach to drug design is unique among small molecule-based biotechnology companies, and has led to significant collaborations and an extensive intellectual property portfolio covering lead classes of compounds directed at gene families of interest.

We also have several single target research programs underway for specific infectious diseases, in areas of high commercial potential and significant unmet medical need.

MULTI-TARGET RESEARCH PROGRAMS

We have two multi-target research programs underway that utilize our parallel drug design approach, in the kinase and caspase gene families. We believe that our integrated approach and our proprietary technologies are now allowing us to rapidly identify appropriate chemical side chains for these scaffolds that will provide specificity for a particular target of interest within a cluster of related protein targets. In the coming years, we expect to initiate discovery efforts in one or more additional gene families.

KINASE INHIBITORS PROGRAM

We have a broad-based drug discovery effort targeting the human kinase protein family, which consists of approximately 500 kinases. Kinases are enzymes that play a key role in transmitting signals between and within cells. Kinases exert their effect by phosphorylating other proteins, which then become activated and perform a specific function. Kinases are implicated in most major diseases, including cancer, autoimmune and inflammatory disease, cardiovascular disease, metabolic disease, and neurological disease. Thus kinases can be ideal targets for intervention with small molecule drugs.

We have initiated research efforts on more than 30 kinase targets, and have conducted preliminary evaluations of approximately 70 additional kinases. In the next six to seven years, we envision advancing eight kinase inhibitors into clinical development targeting multiple therapeutic areas.

We have advanced discovery efforts underway targeting several human MAP kinases. MAP kinases form a group of related enzymes that include extracellular-signal regulated kinase (ERK), p38 MAP kinase, and Jun N-terminal kinase (JNK). As a neuronal-specific isoform of JNK, JNK3 is a member of the MAP kinase family and is implicated to play a role in the pathogenesis of certain neurological diseases such as epilepsy, stroke and Alzheimer's Disease. We have identified several novel classes of JNK3 inhibitors, and are advancing lead compounds toward clinical candidate status. We are also engaged in the discovery of inhibitors of the enzyme ERK2, which plays a role in cell proliferation. We believe that ERK2 inhibitors may have a role in the treatment of cancer. Our p38 MAP kinase inhibitors are discussed earlier in the section titled "Autoimmune and Inflammatory Diseases."

We have advanced drug discovery efforts underway targeting several additional, undisclosed kinase targets, including targets that play a role in the development and progression of cancer, inflammation and cardiovascular disease. We expect to advance one or two novel kinase inhibitors into preclinical development in the next 12 months.

In May 2000 we entered into an agreement with Novartis Pharma AG to collaborate on the discovery, development and commercialization of small molecule drugs directed at targets in the kinase protein family. Certain targets, where we or Novartis already had a substantial program underway prior to May 2000, are excluded from the collaboration. For example, p38 MAP kinase, which is the molecular target for VX-745, our compound in development for inflammatory diseases, is not included within the scope of the Novartis collaboration. The financial and technological support provided by Novartis is enabling us to further expand both our infrastructure and parallel drug design efforts in the protein kinase gene family.

CASPASE INHIBITORS PROGRAM

We are designing novel small molecule inhibitors of selected caspase enzyme targets to treat a variety of diseases in which inflammation and apoptosis (or programmed cell death), plays a role. Our scientists are leveraging the expertise gained through our successful design and optimization of inhibitors of ICE (caspase-1).

All cells have the ability to self-destruct via a tightly-regulated pathway known as apoptosis in response to certain signals. Apoptosis is an essential component of numerous biological processes, including tissue remodeling and immune system regulation. When not properly regulated, apoptosis can have damaging effects and contribute to a variety of diseases. The human caspase family presently includes 11 structurally related enzymes which play specific roles in apoptosis and inflammation. Our discovery effort is focused on the design of small molecules for inhibiting caspase-mediated apoptotic and inflammatory processes, thereby exerting a protective effect on cells in specific tissues. Potential indications include tissue damage related to acute conditions such as stroke and myocardial ischemia, and neurodegenerative disorders such as Alzheimer's Disease and Parkinson's Disease.

Through gene knockout studies, our scientists have been able to gain important insight into the biological role of different caspases in the activation of apoptosis in specific cells and tissues. Vertex research teams have solved the three-dimensional atomic structures of four caspases, including one caspase from each of the three caspase subfamilies, and more than 50 enzyme/inhibitor complexes. Different caspases share similar structural features, and by using parallel structural approaches combined with new medicinal and computational chemistry tools, our scientists have been able to make rapid progress in the design and synthesis of multiple lead classes of compounds. Our caspase research effort reflects the implementation of our strategy for exploiting emerging genomic information by targeting families of structurally-related proteins for drug discovery.

In November 1999, we began collaborating with Taisho Pharmaceutical Co., Ltd. to discover, develop, and commercialize caspase inhibitors in Japan and certain Far East markets. In December 2000, we entered into a collaboration with Serono S.A. to discover, develop, and market caspase inhibitors in other territories, including North America, where we have agreed to establish a joint venture with Serono.

SINGLE TARGET RESEARCH PROGRAMS

HEPATITIS C VIRUS PROGRAMS

We are conducting two discovery research programs to develop compounds to treat hepatitis C. Identified in 1989, 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 CDC have estimated that approximately 2.7 million Americans, or more than 1% of the population, are chronically infected with HCV, and the WHO estimates that there are more than 170 million chronic carriers of the virus worldwide. Currently, there is no vaccine available to prevent hepatitis C infection. The only drugs approved for the treatment of hepatitis C are interferon alpha and ribavirin. Combination therapy with interferon alpha and ribavirin is the most successful treatment currently available. A new form of interferon-alpha, PEG-interferon, has recently been approved. Although the active drug is unchanged, this new prodrug may prove to be more effective than interferon itself, and it is also more convenient for the patient. At present more than 50% of patients still failed to show long-term sustained response to the interferon-alpha/ribavirin combination therapy, and safe and effective treatments for HCV infection are needed.

HEPATITIS C PROTEASE

The hepatitis C NS3-4A serine protease is a virally encoded enzyme generally believed to be essential for replication of HCV. Under an agreement signed during 1997, we are collaborating with Eli Lilly and Company on the research, development and commercialization of novel, orally active HCV protease inhibitors for the treatment of hepatitis C infection. This research derives heavily from detailed structural information about the protease, discovered and developed by our researchers. We are currently optimizing lead classes of inhibitors and plan to select a drug development candidate in 2001.

HEPATITIS C HELICASE

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

Our researchers solved the three-dimensional atomic structure of the HCV NS3 helicase. We are using this structural information to identify inhibitors of the enzyme, employing structure-based techniques, including cluster-based screening, and computational, combinatorial, and medicinal chemistry. The aim is to design novel small molecule inhibitors of the HCV helicase for clinical development as new antiviral drugs to treat HCV infection.

BACTERIAL GYRASE

We are engaged in the discovery of novel antibiotics that target the enzyme DNA gyrase, which is an essential enzyme found in many bacteria. DNA gyrase is utilized during the replication process for these bacterial pathogens. DNA gyrase inhibitors already on the market have proven to be potent, broad-spectrum antibiotics, and are used to treat a variety of common gram (+) and gram (-) infections in various treatment settings. Existing gyrase inhibitors, which work by interacting with the

gyrase A subunit, achieved sales of more than $2.7 billion in 1999. In contrast, we are targeting the gyrase B subunit, and specifically the ATP-binding site that is highly conserved across multiple species of bacteria. We are currently optimizing lead classes of inhibitors and plan to select a drug development candidate in 2001.

KEY COMPONENTS OF OUR TECHNOLOGY PLATFORM

Our integrated technology platform employs a variety of technologies to accelerate the drug discovery process and to provide a more certain outcome in clinical development. Selected technologies include:

GENOMICS AND BIOINFORMATICS. We have an agreement with Incyte Pharmaceuticals for access to its Lifeseq Gold database, a comprehensive portfolio of genomic information. We anticipate accessing or acquiring additional technology, as well as information from both public and private databases, to further our parallel drug design strategy.

FUNCTIONAL GENOMICS. We use a number of functional genomics techniques, such as gene knock-out mice, to help guide target selection and test the potential of chemical compounds in disease models. We also use techniques such as site-directed mutagenesis to identify critical residues for drug interaction in the active site of a molecular target.

BIOPHYSICS. One of our core strengths is the generation of atomic structural information on molecular targets using X-ray crystallography and nuclear magnetic resonance (NMR) spectroscopy to guide design of optimization of lead classes of drugs. Our scientists have also pioneered innovative NMR techniques, including a proprietary technology called NMR SHAPES which can screen molecular subunits for weak affinity to a molecular target. This initial screening can quickly identify lead classes of molecules for further evaluation.

COMPUTER-BASED MODELING. We apply advanced, proprietary computational modeling tools to guide early evaluation of compounds. During initial virtual compound screening ("IN SILICO"), we can evaluate 10(14) compounds in one day to select 100 or 1,000 compounds for synthesis and traditional screening, and repeat the cycle on subsequent days based on initial results. By using proprietary algorithms to sort and filter compounds for specific properties, our scientists can efficiently focus on compounds that are more likely to be useful leads.

MEDICINAL AND COMBINATORIAL CHEMISTRY. Medicinal chemistry expertise is a key part of our drug discovery process. Medicinal chemists visually evaluate each compound which emerges through IN SILICO screening process and provide insight into the creation of focused libraries for screening. We use combinatorial chemistry to design diverse libraries based on promising early leads.

PHARMACOLOGY. We employ a number of approaches designed to provide predictive information on the bioavailability and pharmacokinetic profile of potential compounds at the earliest stages of the drug discovery process. These approaches, which include IN VITRO metabolism and toxicological studies and IN VIVO assessment of leads in predictive animal models, provide greater certainty that a compound will have properties desired of an oral drug.

We have created an organizational framework in which information from many different scientific disciplines is used early and continuously throughout the drug discovery process. We believe that our integrated approach, as demonstrated by our track record in drug design directed at biologically complex targets, provides for faster and more productive drug discovery compared to historical averages for the pharmaceutical industry.

CORPORATE COLLABORATIONS

We have entered into corporate collaborations with pharmaceutical companies that provide financial and other resources, including capabilities in research, development, manufacturing, and sales

and marketing, to support our research and development programs. At present, we have the following major corporate collaborations.

NOVARTIS PHARMA AG

In May 2000 we entered into an agreement with Novartis Pharma AG to collaborate on the discovery, development and commercialization of small molecule drugs directed at targets in the kinase protein family. Under the agreement, Novartis agreed to pay us up to approximately $600 million in pre-commercial payments, comprised of $15 million paid upon signing of the agreement, up to $200 million in product research funding over six years and up to approximately $400 million in further license fees, milestone payments and cost reimbursements. These amounts are based on the development of eight drug candidates. In addition, Novartis created a $200 million loan facility to support certain clinical studies which we may draw down in increments up to $25 million for each drug candidate. The loan is interest free and Novartis will forgive the full amount of any advances if Novartis accepts the drug candidate for development under our agreement with Novartis. We will have the responsibility for drug discovery and clinical proof-of-concept testing of drug candidates. Novartis will have exclusive worldwide development, manufacturing and marketing rights to clinically and commercially relevant drug candidates that it accepts for development from us. We will receive royalties on any products that are marketed as part of the collaboration. Subject to certain conditions, we will have co-promotion rights in the United States and Europe. We will retain the rights to any intellectual property resulting from this collaboration. Novartis may terminate this agreement without cause after four years upon one year's written notice.

TAISHO PHARMACEUTICAL CO., LTD.

In November 1999, we entered into a collaboration with Taisho covering the discovery, development, and commercialization of caspase inhibitors for the treatment of cerebrovascular, cardiovascular and neurodegenerative diseases. Taisho will have an option to obtain marketing rights in Japan and certain Far East markets for any compounds arising from the collaboration. Under the agreement, Taisho agreed to pay us up to $43 million comprised of research funding and milestone payments, including $4.5 million for prior research costs. These amounts are based on the development of two compounds. We will also receive royalties on future product sales, if any. In addition, Taisho will also pay for certain costs of developing compounds that emerge from the caspase research program.

SERONO S.A.

In December 2000, we entered into a collaboration with Serono S.A. to discover, develop, and market caspase inhibitors. Under the terms of the agreement, we could receive up to $95 million to support and expand our drug discovery activities in the caspase protein family, including milestone payments as drug candidates move through development. Under the terms of the agreement, we will receive a total of up to $5 million in payments for prior research, and could also receive up to $20 million in research funding over the next five years. We could also receive an additional $70 million in milestone payments for the successful development and commercialization of more than one drug candidate. The two companies will share development costs. Vertex and Serono will establish a joint venture for the commercialization of products in North America, where we will share marketing rights and profits from the sale of caspase inhibitors. Serono will have exclusive rights to market caspase inhibitors in other territories, excluding Japan and certain other countries in the Far East, and will pay us for the supply of drug substance. Serono has the right to terminate the agreement without cause upon 90 days written notice, effective either at September 30, 2002 or September 30, 2004.

AVENTIS S.A.

In September 1999, we entered into an expanded agreement with Hoechst Marion Roussel (HMR) covering the development of HMR 3480/VX-740. HMR and Rhone-Poulenc Rorer merged to form Aventis in December 1999. Aventis has an exclusive worldwide license to develop, manufacture and

market VX-740, as well as an exclusive option for all other compounds discovered as part of the research collaboration between Vertex and HMR that ended in 1997. Aventis will fund the development of VX-740. We may co-promote the product in the United States and Europe and will receive royalties on global sales, if any. Under the agreement, Aventis agreed to pay us $20 million for prior research costs, and $62 million in milestone payments for successful development by Aventis of VX-740 in rheumatoid arthritis, the first targeted indication, as well as similar milestone payments for each additional indication. Aventis has the right to terminate this agreement without cause upon six months' written notice.

SCHERING AG (GERMANY)

In August 1998, we entered into a collaboration with Schering AG covering the research, development and commercialization of novel, orally active neurophilin ligand compounds to promote nerve regeneration for the treatment of a number of neurological diseases. Vertex and Schering AG will have an equal role in management of neurophilin ligand research and product development. In North America, we will have manufacturing rights, and we will share equally with Schering AG in the marketing expenses and profits from commercialized compounds. In addition to having manufacturing rights in North America, we retain the option to manufacture bulk drug substance for sales and marketing in territories outside Europe, the Middle East and Africa. Schering AG will have the right

to manufacture and market any commercialized compounds in Europe, the Middle East and Africa, and pay us a royalty on product sales. Under the terms of the agreement, Schering AG will pay us up to $88 million, comprised of $6 million paid upon signing in September 1998, up to $22 million of product research funding over five years and $60 million of development and commercialization milestone payments. Schering AG has the right to terminate without cause upon six months' written notice.

KISSEI PHARMACEUTICAL CO., LTD.

HIV PROTEASE INHIBITORS. In April 1993, we entered into a collaboration with Kissei covering the development of amprenavir, our HIV protease inhibitor. Kissei has exclusive rights to develop and commercialize amprenavir in Japan and will pay us a royalty on sales. Kissei also has an exclusive option to develop and commercialize the amprenavir prodrug, VX-175, in Japan. We are responsible for the manufacture of bulk product for Kissei. Under the collaborative agreement, Kissei agreed to pay to us up to $20 million, comprised of $9.8 million of product research funding over three years, $7 million of development and commercialization milestone payments and a $3.2 million equity investment. We have received the full amount of research funding specified under the agreement.

P38 MAP KINASE. In September 1997, we entered into a collaboration with Kissei to identify and develop compounds that target p38 MAP kinase, including VX-745. We will collaborate with Kissei in the development and commercialization of novel, orally active p38 MAP kinase inhibitors as drugs for the treatment of inflammatory and neurological diseases. Kissei has exclusive rights to develop and commercialize these compounds in Japan and certain Southeast Asian countries and semi-exclusive rights in China, Taiwan and South Korea. We retain exclusive marketing rights in the United States, Canada, Europe, and the rest of the world. In addition, we 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. Under the terms of the agreement, Kissei agreed to pay us up to $22 million, comprised 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. Additionally, Kissei agreed to pay certain costs. The research program ended on June 30, 2000, and we have received the full amount of research funding specified under the agreement. Kissei has the right to terminate the agreement without cause upon six months' notice.

ELI LILLY & COMPANY

In June 1997, we entered into a collaboration with Lilly covering the development of novel small molecule compounds to treat hepatitis C infection. Vertex and Lilly will jointly manage the research,

development, manufacturing and marketing of drug candidates emerging from the collaboration. We 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. Vertex has retained options to assist with the promotion of drugs from the collaboration in the United States and other selected territories. We have the option to supply 100% of Lilly's commercial drug substance supply needs. We will receive royalties on future product sales, if any. If we exercise our commercial supply option, we will receive drug supply payments in addition to royalties on future product sales, if any. Under the terms of the agreement, Lilly will pay us up to $51 million, comprised of a $3 million payment paid in June 1997, $33 million of product research funding over six years and $15 million of development and commercialization milestone payments. Lilly has the right to terminate the agreement without cause upon six months' notice.

GLAXOSMITHKLINE

In December 1993, we entered into a collaboration with GlaxoSmithKline covering the development and commercialization of Agenerase (amprenavir) and its prodrug, VX-175 (also referred to as GW433908). GlaxoSmithKline has exclusive rights to develop and commercialize our HIV protease inhibitors in all parts of the world except the Far East and pays us a royalty on sales. We have retained certain bulk drug manufacturing rights and certain co-promotion rights in the territories licensed to GlaxoSmithKline. Under the collaborative agreement, GlaxoSmithKline agreed to pay us up to $42 million, comprised of a $15 million license payment paid in 1993, $14 million of product research funding over five years and $13 million of development and commercialization milestone payments for an initial drug candidate. GlaxoSmithKline is also obligated to pay us additional development and commercialization milestone payments for subsequent drug candidates, including VX-175. We have received the full amount of research funding specified under the agreement. In addition, GlaxoSmithKline is required to bear the costs of development in its territory under the collaboration.

GlaxoSmithKline has the right to terminate its agreement with us without cause upon twelve months' notice. Termination by GlaxoSmithKline of the agreement will relieve GlaxoSmithKline of its obligation to make further commercialization and development milestone and royalty payments, and will end any license granted to GlaxoSmithKline by us.

We and GlaxoSmithKline have a non-exclusive, worldwide license under certain Searle patent applications claiming HIV protease inhibitors to permit Vertex and GlaxoSmithKline to develop, manufacture and market Agenerase free of the risk of intellectual property claims by Searle. The terms of the license require us to pay Searle a royalty on net sales.

INTELLECTUAL PROPERTY

We vigorously pursue patents to protect our intellectual property. As of December 31, 2000, we had 89 issued U.S. patents and 95 pending U.S. patent applications covering proprietary technologies and intellectual property within our discovery and development programs, as well as foreign counterparts in many other countries.

We actively seek, when appropriate, protection for our products and proprietary information by means of United States and foreign patents, trademarks and contractual arrangements. In addition, we rely upon trade secrets and contractual arrangements to protect certain of our proprietary information and products. In addition to patents and pending patent applications that relate to potential drug targets, compounds we are developing to modulate those targets, and methods of using such compounds, we have several patents and pending patent applications directed to proprietary elements of our drug discovery platform. These include a patent application on our SHAPES approach to NMR-based screening and on the use of a protein or a mutant of that protein to design inhibitors of other related proteins. We have also filed patent applications and obtained patents related to the three-dimensional atomic structures of targets of interest, the use of those structures to design drugs, classes

of compounds that bind to a target of interest, and the interactions required between a compound and a target of interest.

Much of our technology and many of our processes depend upon the knowledge, experience and skills of key scientific and technical personnel. To protect our rights to our proprietary know-how and technology, we require all employees, consultants, advisors and collaborators to enter into confidentiality agreements that prohibit the disclosure of confidential information to anyone outside Vertex. These agreements require disclosure and assignment to Vertex of ideas, developments, discoveries and inventions made by employees, consultants, advisors and collaborators.

PATENTS AND PENDING APPLICATIONS

We have issued patents and pending applications in the United States, and in foreign countries we deem appropriate, covering intellectual property developed as part of each of our most advanced research, development and commercialized programs. These include:

- issued United States patents that cover classes of chemical compounds, pharmaceutical formulations and/or uses of the same for treating HIV infection and AIDS. The patents include specific coverage for amprenavir, pharmaceutical formulations containing amprenavir and methods of using of amprenavir to treat HIV infection or AIDS-related central nervous system disorders. Another issued United States patent covers processes for preparing synthetic intermediates useful in the synthesis of a class of compounds that includes amprenavir. We have a non-exclusive, worldwide license under certain Searle patent applications claiming HIV protease inhibitors. We also have applications pending in the United States and other countries claiming VX-175 and related compounds.

- issued United States patents that cover classes of chemical compounds, pharmaceutical compositions containing such compounds, and methods of using those compounds to treat or prevent IMPDH-mediated diseases. The class of compounds covered by one of these patents includes VX-497.

- issued United States patents claiming Incel and structurally related compounds, VX-853 and structurally related compounds, and other compounds for treating multidrug resistance, as part of our MDR research and development program.

- issued United States patents covering the active metabolite of VX-740, several different classes of compounds useful as inhibitors of ICE, pharmaceutical compositions containing those compounds and methods of using those compounds to treat ICE-related diseases. We have also received a Notice of Allowance in an application claiming VX-740. These patents and applications also include a series of patents and applications purchased from Sanofi S.A., in July 1997. We also have a United States patent obtained from Sanofi S.A. that covers DNA sequences encoding ICE.

- an issued patent that covers a class of chemical compounds that includes VX-745, as well as applications claiming VX-745 specifically, compositions comprising those compounds and the use of those compounds to treat p38-related disorders, as part of our p38 MAP kinase research and development program.

- issued United States patents covering various classes of chemical compounds and their use to treat a wide variety of neurological disorders. One of these patents specifically covers the use of timcodar to treat neurological disorders, as part of our neurophilin research and development program.

- issued United States patents covering assays useful to evaluate potential inhibitors of hepatitis C protease. We also have both allowed and pending applications covering the X-ray crystal structures of hepatitis C protease and hepatitis C helicase, including the use of those structures

to develop hepatitis C protease inhibitors and hepatitis C helicase inhibitors, respectively. Other applications cover hepatitis C protease inhibitors and hepatitis C helicase inhibitors.

- filed applications claiming classes of caspase inhibitors and a caspase target discovered under our caspase inhibitors program.

- filed applications claiming inhibitors of multiple kinases, as part of our kinase research programs.

- filed applications and an issued patent for methods of designing novel chemical inhibitors of protein kinases. The patented method involves using mutagenesis techniques to create hybrid kinases that act as surrogate targets for drug design and compound screening. This method, which combines the disciplines of cell biology, structural genomics, computational chemistry and medicinal chemistry, may accelerate the design and development of new drug candidates by reducing lead discovery and optimization timelines.

- filed applications claiming inhibitors of bacterial gyrase.

We do not know whether any patents will issue from any of our patent applications or, even if patents issue or have issued, that the issued claims will provide us with any significant protection against competitive products or otherwise be valuable commercially. Legal standards relating to the validity of patents and the proper scope of their claims in the biopharmaceutical field are uncertain. We also cannot be sure that we will be able 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.

MANUFACTURING

We rely on third party manufacturers and collaborative partners to produce our compounds for preclinical and clinical purposes and may do so for commercial production of any compounds that are approved for marketing. Commercial manufacturing of Agenerase is being done by GlaxoSmithKline. We retain the option to manufacture a portion of GlaxoSmithKline's requirements for bulk drug substance for Agenerase and its prodrug, VX-175. If we were to exercise that option, we would rely upon one or more contract manufacturers to manufacture the bulk drug substance on our behalf.

We have established a quality assurance program, including a set of standard operating procedures, intended to ensure that third party manufacturers under contract produce our compounds in accordance with the FDA's current Good Manufacturing Practices, or cGMP, and other applicable regulations.

We believe that all of our existing compounds can be produced using established manufacturing methods, primarily through standard techniques of pharmaceutical synthesis. We believe that we will be able to continue to negotiate third party manufacturing arrangements on commercially reasonable terms and that it will not be necessary for us to develop internal manufacturing capability in order to successfully commercialize our products. Our objective is to maintain flexibility in deciding whether to develop internal manufacturing capabilities for certain of our potential products. However, in the event that we are unable to obtain contract manufacturing, or obtain such manufacturing on commercially reasonable terms, we may not be able to commercialize our products as planned. We have 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 we will further develop such capabilities successfully.

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

The production of our compounds is based in part on technology that we believe to be proprietary. We may license this technology to contract manufacturers to enable them to manufacture compounds for us. In addition, a contract manufacturer may develop process

technology related to the manufacture of our compounds that the manufacturer owns either independently or jointly with us. This would increase our reliance on such manufacturer or require us to obtain a license from such manufacturer in order to have our products manufactured.

COMPETITION

We are engaged in biopharmaceutical 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 same human therapeutic applications as those that we are targeting. In order for us to compete successfully, we must demonstrate improved safety, efficacy, ease of manufacturing and market acceptance of our products over those of our competitors who have received regulatory approval and are currently marketing their drugs. In the field of HIV protease inhibition, Merck & Co., Inc., Abbott Laboratories, Inc., Hoffmann-La Roche, and Pfizer Inc. have other HIV protease inhibitor drugs on the market. Many of our competitors have substantially greater financial, technical and human resources than ours and more experience in the development of new drugs.

GOVERNMENT REGULATION

Our 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 in the U.S. For diseases for which no appropriately predictive animal model exists, no such results can be filed. For several of our 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 and duration 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 at the institution at which the study will be conducted. The Institutional Review Board 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. We 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, 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. We intend to seek the benefits of this statute, but there can be no assurance that we 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, we are 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.

EMPLOYEES

As of December 31, 2000, we had 455 full-time employees, including 300 in research and development, 32 in support services and 123 in general and administrative functions. 52 of these employees were located at our U.K. research and development facility. Our scientific staff members (174 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. Our employees are not covered by a collective bargaining agreement, and we consider our relations with our employees to be good.

EXECUTIVE OFFICERS AND DIRECTORS

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

NAME	AGE	POSITION
Joshua S. Boger, Ph.D.	49	Chairman and Chief Executive Officer
Vicki L. Sato, Ph.D.	52	President
John J. Alam, M.D.	39	Senior Vice President of Drug Evaluation and Approval
Lynne H. Brum	37	Vice President of Corporate Communications and Market Development
Iain P. M. Buchanan	47	Vice President of European Operations; Managing Director of Vertex Pharmaceuticals (Europe) Limited
Barry M. Bloom, Ph.D.	72	Director
Roger W. Brimblecombe, Ph.D., D.Sc.	71	Director
Donald R. Conklin	64	Director
Charles A. Sanders, M.D.	69	Director
Elaine S. Ullian	53	Director
Bruce I. Sachs	41	Director

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

Dr. Sato joined Vertex in September 1992 as Vice President of Research and Chief Scientific Officer. She was appointed Senior Vice President of Research and Development in September 1994.

She served as Chair of the Scientific Advisory Board from 1992 until December 2000. 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. Alam served as Vice President of Clinical Development of the Company from October 1997 until January 2001, when was appointed Senior Vice President of Drug Evaluation and Approval. Dr. Alam came to Vertex from Biogen, Inc., where he held a variety of positions from 1991-1997, including Director of Medical Research and Program Executive for Avonex (beta interferon). Prior to joining Biogen, Dr. Alam was a Research Fellow at the Dana Farber Cancer Institute and had completed an internal medicine residency at Brigham and Women's Hospital in Boston. Dr. Alam holds an M.D. from Northwestern University Medical School and a S.B. in Chemical Engineering from the Massachusetts Institute of Technology.

Ms. Brum joined Vertex as Director, Corporate Communications in 1994 and was Vice President of Corporate Communications of the Company from 1998 until January 2001, when she was appointed Vice President of Corporate Communications and Market Development. Ms. Brum came to Vertex from Feinstein Kean Healthcare, a communications and business consulting practice, where she was a vice president. Previously, she held corporate communications and research positions at Biogen, Inc. Ms. Brum holds an M.B.A. from the Simmons Graduate School of Management, and a B.A. in biological sciences from Wellesley College.

Mr. Buchanan joined Vertex 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.

Dr. Bloom has served as our director since 1994. He was formerly with Pfizer Inc. as Executive Vice President of Research and Development from 1992 to 1993, and as Vice President from 1990 to 1992, and a director from 1973 to 1993. He also serves as a director of Cubist Pharmaceuticals Inc., Incyte Genomics Inc., Neurogen Corporation and Microbia.

Dr. Brimblecombe has served as our director since 1993. He served as Chairman of Vanguard Medica Ltd. from 1991 to 2000, as Chairman of Core Group plc since 1997, and as Non-Executive Chairman of Oxford Asymmetry International plc from 1997 to 2000. From 1979 to 1990, he held various Vice Presidential posts in SmithKline & French Laboratories research and development organization. He also serves as a director of several companies located in Europe.

Mr. Conklin has served as our director since 1994. He served as Executive Vice President of Schering Plough from 1986 to 1996 and subsequently retired at the end of 1996. He also serves as a director of AlfaCell Inc. and Ventiv Inc.

Mr. Sachs has served as our director since 1998. He currently serves as a General Partner at Charles River Ventures. From 1998 to 1999, he served as Executive Vice President and General Manager of Ascend Communications, Inc. From 1997 until 1998, Mr. Sachs served as President and CEO of Stratus Computer, Inc. From 1995 to 1997, he served as Executive Vice President and General Manager of the Internet Telecom Business Group at Bay Networks, Inc. From 1993 to 1995, he served as President and Chief Executive Officer at Xylogics, Inc.

Dr. Sanders has served as our director since 1996. He retired in 1994 as Chief Executive Officer and in 1995 as Chairman of Glaxo Inc. From 1990 to 1995, he served as a member of the board of Glaxo plc. From 1981 to 1989, Dr. Sanders held a number of positions at the Squibb Corporation,

including that of Vice Chairman. Has served on the boards of Merrill Lynch, Reynolds Metals Co. and Morton International Inc. He is currently a director of Biopure Corporation, Edgewater Inc., Genentech, Inc., Kendle International Inc., Magainin Pharmaceuticals Inc., Pharmacopeia Inc., Scios, Inc., and Trimeris Inc.

Ms. Ullian has served as our director since 1997. Since 1996, she has served as President and Chief Executive Officer of Boston Medical Center. From 1994 to 1996, she served as President and Chief Executive Officer of Boston University Medical Center Hospital. From 1987 to 1994, Ms. Ullian served President and Chief Executive Officer of Faulkner Hospital. She also serves as a director of Hologic Inc.

SCIENTIFIC ADVISORY BOARD

Vertex's Scientific Advisory Board consists of individuals with demonstrated expertise in various fields who advise us concerning long-term scientific planning, research and development. The Scientific Advisory Board also evaluates our research programs, recommends personnel to us and advises us on technological matters. The members of the Scientific Advisory Board, which is chaired by Dr. Mark Murcko, our Chief Technology Officer, are:

Mark Murcko, Ph.D.....	Vice President and Chief Technology Officer, Vertex Pharmaceuticals Incorporated.
Vicki L. Sato, Ph.D.....	President, Vertex Pharmaceuticals Incorporated.
Steven J. Burakoff, M.D.....	Laura and Isaac Perlmutter Professor, New York University School of Medicine; Director, Kaplan Comprehensive Cancer Center, New York University School of Medicine; Director, Skirball Institute of Biomolecular Medicine, New York School of Medicine.
Eugene H. Cordes, Ph.D.....	Professor of Medicinal Chemistry, College of Pharmacy, 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.....	Higgins Professor of Biochemistry, 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 and Amory Houghton 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. Murcko and Dr. Sato, none of the members of the Scientific Advisory Board is employed by Vertex, 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 us. Accordingly, such persons are expected to devote only a small portion of their time to us. In addition to our Scientific Advisory Board, we have established consulting relationships with a number of scientific and medical experts who advise us on a project-specific basis.

RISK FACTORS

WE DO NOT KNOW HOW SUCCESSFUL AGENERASE WILL BE IN EUROPE, OR WHETHER U.S. AGENERASE SALES WILL CONTINUE AT CURRENT LEVELS.

Agenerase was only recently launched in Europe. It is too early to predict the extent to which Agenerase will be successful in Europe. Also, Agenerase's share of the U.S. protease inhibitor market may decrease due to competitive forces and market dynamics. Five other HIV protease inhibitors and a number of other products, including DuPont's Sustiva and GlaxoSmithKline's Ziagen, are on the market for the treatment of HIV infection and AIDS. Other drugs are still in development by our competitors, including Bristol Myers Squibb and Boehringer Ingelheim, which may have better efficacy, fewer side effects, easier administration and/or lower costs than Agenerase. Moreover, the growth in the worldwide market for HIV protease inhibitors has, to a certain extent, occurred as a result of early and aggressive treatment of HIV infection with a protease inhibitor-based regimen. Changes in treatment strategy, in which treatment is initiated later in the course of infection, or in which treatment is more often initiated with a regimen that does not include a protease inhibitor, may result in less use of HIV protease inhibitors. In addition, the clinical benefit of strategies used to boost drug levels of Agenerase by co-administering other antiretrovirals may not prove to be effective, or may not result in increased revenues. As a result, the total market for protease inhibitors, in the U.S. and Europe, may decline, decreasing Agenerase sales potential. Consequently, we may not recognize additional royalty and milestone revenues on Agenerase as soon as we have planned. Further, although we co-promote Agenerase in the U.S. and Europe, GlaxoSmithKline is making most of the marketing and sales efforts and we will have little control over the success of those efforts. GlaxoSmithKline has the right to terminate its agreement with us without cause upon twelve months' notice.

IF WE DO NOT SUCCESSFULLY DEVELOP OUR DRUG PIPELINE, WE MAY NOT GENERATE SUFFICIENT FUNDS TO ACHIEVE OR SUSTAIN PROFITABILITY IN THE FUTURE.

As of December 31, 2000, our collaborators and we were conducting clinical trials for eight product candidates resulting from our research and development programs, including additional clinical trials of VX-175, VX-497, VX-740 and VX-745, and preclinical testing of four product candidates from these programs. All of the products that we are pursuing will require extensive additional development, testing and investment, as well as regulatory approvals, prior to commercialization. Our product research and development efforts may not be successful. Our drug candidates may not enter preclinical or clinical studies as or when anticipated or receive the required regulatory approvals. Moreover, our products, if introduced, may not be commercially successful. The results of preclinical and initial clinical trials of products under development by us are not necessarily predictive of results that will be obtained from large-scale clinical testing. Clinical trials of products under development may not demonstrate the safety and efficacy of such products or result in a marketable product. In addition, the administration alone or in combination with other drugs of any product developed by us may produce undesirable side effects in humans.

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 our company. In addition, the FDA may require additional clinical trials, which could result in increased costs and significant development delays. While all or a portion of these additional costs may be covered by payments under our collaborative agreements, we bear all of the costs for our development candidates that are not partnered.

IF DELAYS IN PATIENT ENROLLMENT SLOW OUR DEVELOPMENT PROCESS WE MAY LOSE OUR COMPETITIVE ADVANTAGE OR BE UNABLE TO BRING OUR DRUGS TO MARKET.

The rate of completion of clinical trials of our 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, the level

of compliance by the clinical sites to clinical trial protocols, and the availability of clinical trial material. Our drug candidate VX-745 is the first p38 MAP kinase inhibitor to enter Phase II clinical trials. While none of our clinical trials are currently experiencing slower than expected patient accrual, delays in patient enrollment in our planned clinical trials for VX-745 may result in increased costs, program delays or both, which could have a material adverse effect on our company. While all or a portion of these additional costs may be covered by payments under our collaborative agreements, we bear all of the costs for our development candidates that are not partnered. If our clinical trials are not completed, we may not be able to submit a new drug application and any such application may not be reviewed and approved by the FDA in a timely manner, if at all.

IF WE DO NOT OBTAIN REGULATORY APPROVAL FOR OUR PRODUCTS ON A TIMELY BASIS, OR AT ALL, OUR REVENUES WILL BE NEGATIVELY IMPACTED.

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. 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 planned clinical trials for our drug candidates in clinical development, including VX-175, VX-497, VX-740, VX-745, VX-148 and timcodar. It may also delay the commercialization of our products, if any are developed and submitted for approval, for a considerable period of time, impose costly procedures upon our activities and provide competitive advantages to companies more experienced in regulatory affairs that compete with us. Moreover, even if approval is granted, such approval may entail limitations on the indicated uses for which a compound may be marketed.

IF WE ARE UNABLE TO ATTRACT AND RETAIN COLLABORATIVE PARTNERS FOR RESEARCH SUPPORT AND THE DEVELOPMENT AND COMMERCIALIZATION OF OUR PRODUCTS, WE MAY NOT BE ABLE TO FUND OUR RESEARCH AND DEVELOPMENT ACTIVITIES.

Our collaborative partners have agreed to fund portions of our research and development programs and/or to conduct certain research and development relating to specified products. In exchange, we have given them technology, product and marketing rights relating to those products. Some of our corporate partners, including Novartis, GlaxoSmithKline, Aventis and Eli Lilly, have rights to control the planning and execution of product development and clinical programs. The corporate partners may exercise their control rights in ways that may negatively impact the timing and success of those programs. Our collaborations are subject to termination rights by the collaborators. If any of Novartis, GlaxoSmithKline, Aventis or Eli Lilly were to terminate its relationship with us, or fail to meet its

contractual obligations, it could have a material adverse effect on our ability to undertake research, to fund related and other programs and to develop, manufacture and market any products that may have resulted from the collaboration. For example, if Novartis were to terminate its collaboration with us before the end of the research term specified in the contract, we would no longer be eligible to receive milestone payments and reimbursements worth as much as $400 million from Novartis. We expect to seek additional collaborative arrangements to provide research support and to develop and commercialize our products in the future. We may not be able to establish acceptable collaborative arrangements in the future and even if we establish such collaborations, they may not be successful. Under certain of our collaborative agreements, our partners have agreed to provide funding for only a portion of our research and development activities and we are committed to investing our own capital to fund the remainder of the agreed upon programs. However, we may not have adequate financial resources to satisfy those requirements.

IF WE LOSE OUR TECHNOLOGICAL ADVANTAGES, WE MAY NOT BE ABLE TO COMPETE IN THE MARKETPLACE.

We believe that our chemogenomics platform and parallel drug design strategy give us a technological advantage. However, the pharmaceutical research field is characterized by rapid technological progress and intense competition. As a result, we may not realize the expected benefits of these technologies. For example, a large pharmaceutical company, with significantly more resources than we have, could pursue a novel, systematic approach to discover drugs based on gene families using proprietary drug targets, compound libraries, compound approaches, structural protein analysis and information technologies. Such a company might identify broadly applicable compound classes faster and more effectively than we do, impeding our ability to develop and market drugs based on our approach. Further, we believe that interest in the application of structure-based drug design, parallel drug design and related approaches may continue and may accelerate as the strategies become more widely understood. Businesses, academic institutions, governmental agencies and other public and private research organizations are conducting research to develop technologies that may compete with those we use. It is possible that our competitors could acquire or develop technologies that would render our technology obsolete or noncompetitive. For example, a competitor could develop information technologies that accelerate the atomic-level analysis of potential compounds that bind to the active site of a drug target, and predict the absorption, toxicity, and relative ease-of-synthesis of candidate compounds. If we were unable to access the same technologies at an acceptable price, our business could be adversely affected.

IF OUR COMPETITORS BRING SUPERIOR PRODUCTS TO MARKET OR BRING THEIR PRODUCTS TO MARKET BEFORE WE DO, WE MAY BE UNABLE TO FIND A MARKET FOR OUR PRODUCTS.

Our products in development may not be able to compete effectively with products which are currently on the market or new products that may be developed by others. There are many other companies developing products for the same indications that we are pursuing in development. For example, we know of at least 10 drugs in development for HIV, 5 drugs in development for the treatment of hepatitis C infection, and 20 drugs in development for the treatment of rheumatoid arthritis, by competitors in the pharmaceutical and biotechnology industries. In order to compete successfully in these areas, we must demonstrate improved safety, efficacy, ease of manufacturing and gain market acceptance over competing products which have received regulatory approval and are currently marketed. Many of our competitors, including major pharmaceutical companies such as GlaxoSmithKline, Novartis, Abbott and Merck, have substantially greater financial, technical and human resources than we do. In addition, many of our competitors have significantly greater experience than we do in conducting preclinical testing and human clinical trials of new pharmaceutical products, and in obtaining FDA and other regulatory approvals of products. Accordingly, our competitors may succeed in obtaining regulatory approval for products more rapidly than we do. If we obtain regulatory approval and launch commercial sales of our products, we will also compete with respect to manufacturing efficiency and sales and marketing capabilities, areas in which we currently have limited experience.

THE LOSS OF THE SERVICES OF KEY EMPLOYEES OR THE FAILURE TO HIRE QUALIFIED EMPLOYEES WOULD NEGATIVELY IMPACT OUR BUSINESS AND FUTURE GROWTH.

Because our products are highly technical in nature, only highly qualified and trained scientists have the necessary skills to develop our products. Our future success will depend in large part on the continued services of our key scientific and management personnel, including Dr. Joshua S. Boger, our Chief Executive Officer, and Dr. Vicki L. Sato, our President. While we have entered into employment agreements with Dr. Boger and Dr. Sato, they may be terminated by the employee upon six months' notice.

We face intense competition for our scientific personnel from our competitors, our collaborative partners and other companies throughout our industry. Moreover, the growth of local biotechnology companies and the expansion of major pharmaceutical companies into the Cambridge area has increased competition for the available pool of skilled employees, especially in technical fields, and the high cost of living in the Boston area makes it difficult to attract employees from other parts of the country. A failure to

retain, as well as hire, train and effectively integrate into our organization, a sufficient number of qualified scientists and professionals would negatively impact our business and our ability to grow our business. In addition, the level of funding under certain of our collaborative agreements, in particular the Novartis collaboration, depends on the number of our scientists performing research under those agreements. If we cannot hire and retain the required personnel, funding received under the agreements may be reduced.

IF WE FAIL TO MANAGE OUR GROWTH EFFECTIVELY, OUR BUSINESS MAY SUFFER.

During the year 2000, we added approximately 100 employees, increasing the size of our organization by almost 30%, and we intend to continue to grow. This growth requires a significant investment in personnel, management systems and resources. Our ability to commercialize our products, achieve our research and development objectives, and satisfy our commitments under our collaboration agreements depends on our ability to respond effectively to these demands and expand our internal organization to accommodate additional anticipated growth. If we are unable to manage growth effectively, there could be a material adverse effect on our business.

WE DEPEND ON THIRD PARTY MANUFACTURERS, AND IF WE ARE UNABLE TO OBTAIN CONTRACT MANUFACTURING ON REASONABLE TERMS, WE MAY NOT BE ABLE TO DEVELOP OR COMMERCIALIZE OUR PRODUCTS.

Our ability to conduct clinical trials and our ability to commercialize our potential products will depend, in part, on our ability to manufacture our products on a large scale, either directly or through third parties, at a competitive cost and in accordance with FDA and other regulatory requirements. We have no experience in manufacturing pharmaceuticals or other products, and we may not be able to develop such capabilities in the foreseeable future. In addition, some of our current corporate partners have manufacturing rights with respect to our products under development. We are, therefore, dependent on third party manufacturers and our collaborative partners for the production of our compounds for preclinical research, clinical trial purposes and commercial production. Accordingly, if we are not able to obtain contract manufacturing from these third parties on commercially reasonable terms, we may not be able to conduct or complete clinical trials or commercialize our products as planned. Further, commercial formulation and manufacturing processes have yet to be developed for our drug candidates other than Agenerase. As a result, our collaborators or we may encounter difficulties developing commercial formulations and manufacturing processes for our drug candidates that could result in delays in clinical trials, regulatory submissions, regulatory approvals and commercialization of our products.

IF OUR PATENTS DO NOT PROTECT OUR PRODUCTS, OR OUR PRODUCTS INFRINGE THIRD-PARTY PATENTS, WE COULD BE SUBJECT TO LITIGATION AND SUBSTANTIAL LIABILITIES.

As of December 31, 2000, we had 103 patent applications pending in the United States, as well as foreign counterparts in other countries. Our success will depend, in significant part, on our ability to obtain and maintain United States and foreign patent protection for our products, their uses and our processes to preserve our trade secrets and to operate without infringing the proprietary rights of third parties. We do not know whether any patents will issue from any of our patent applications or, even if patents issue or have issued, that the issued claims will provide us with any significant protection against competitive products or otherwise be valuable commercially. 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. If we are not able to obtain adequate patent protection, our ability to prevent competitors from making, using and selling competing products will be limited. Furthermore, our activities may infringe the claims of patents held by third parties. We are currently contesting a suit filed by Chiron Corporation claiming infringement of three U.S. patents issued to Chiron. Although we believe that the ultimate outcome of the action will not have a material impact on our consolidated financial position, defense and prosecution of patent claims, including those at issue in the Chiron case, as well as participation in other inter-party proceedings, can be expensive and time-consuming, even in those instances in which the outcome is favorable to us. If the outcome of any such litigation or proceeding were adverse, we 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 our company.

WE EXPECT TO INCUR FUTURE LOSSES AND WE MAY NEVER BECOME PROFITABLE.

We have incurred significant operating losses each year since our inception and expect to incur a significant operating loss in 2001. We believe that operating losses will continue beyond 2001, even if we receive significant future payments under our existing and future collaborative agreements and royalties on Agenerase sales, because we are planning to make significant investments in research and development, and will incur significant selling, general, and administrative expenses for our potential products. We expect that losses will fluctuate from quarter to quarter and year to year, and that such fluctuations may be substantial. We may never achieve or

sustain profitability.

WE MAY NEED TO RAISE ADDITIONAL CAPITAL THAT MAY NOT BE AVAILABLE.

We expect to incur substantial research and development and related supporting expenses as we design and develop existing and future compounds and undertake clinical trials of potential drugs resulting from such compounds. We also expect 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. We anticipate that we will finance these substantial cash needs with:

- future payments under our collaborative agreements;

- additional collaborative agreements;

- Agenerase royalty revenue;

- existing cash reserves, together with interest earned on those reserves;

- facilities and equipment financing; and

- future product sales to the extent that we market products directly.

We expect that funds from these sources will be sufficient to fund our planned activities for at least the next 18 months. If not, it will be necessary to raise additional funds through public offerings or private placements of equity or debt securities or other methods of financing. Any equity financings could result in dilution to our then existing securityholders. Any debt financing, if available at all, may be on terms which, among other things, restrict our ability to pay dividends and interest (although we do not intend to pay dividends for the foreseeable future). The required interest payments associated with any significant additional debt financing could materially adversely impact our ability to service the notes. The terms of any additional debt financing may also, under certain circumstances, restrict or prohibit us from making interest payments on the notes. If adequate funds are not available, we may be required to curtail significantly or discontinue one or more of our research, drug discovery or development programs, including clinical trials, or attempt to obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to certain of our technologies

or products in research or development. Additional financing may not be available on acceptable terms, if at all.

IF GOVERNMENT AND PRIVATE INSURANCE PLANS DO NOT PAY FOR AGENERASE, AGENERASE MAY NOT BE SUCCESSFUL.

The success of Agenerase in Europe will depend, in part, upon the extent to which a consumer will be able to obtain reimbursement for the cost of Agenerase from government health administration authorities, third-party payors and other organizations. Agenerase has been approved for marketing in the European Union but reimbursement amounts are determined on a country by country basis, and in some countries these reimbursement amounts have not yet been finalized. Even if a product is approved for marketing, the amount paid by reimbursing organizations may not be adequate. Also, future legislation or regulation, or related announcements or developments, concerning the health care industry or third-party or governmental coverage and reimbursement may adversely affect reimbursement policies. In particular, legislation or regulation limiting consumers' reimbursement rights could limit reimbursement amounts for the cost of Agenerase.

OUR SALES AND MARKETING EXPERIENCE IS LIMITED.

We currently have little experience in marketing and selling pharmaceutical products. We must either develop a marketing and sales force or enter into arrangements with third parties to market and sell any of our product candidates which are approved by the FDA. We currently intend to bring VX-497 and VX-745 to market ourselves. For these drug candidates and our other drug candidates for which we have retained marketing or co-promotion rights, we may not be able to develop successfully our own sales and marketing force. We do not know whether we will be able to enter into marketing and sales agreements with others on acceptable terms, if at all. If we develop our own marketing and sales capability, we may be competing with other companies that currently have experienced and well-funded marketing and sales operations. We have granted exclusive marketing rights for Agenerase and VX-175 to Glaxo SmithKline worldwide except the Far East, and for VX-740 to Aventis worldwide. Kissei has exclusive marketing rights to Agenerase, VX-745 and VX-702 in Japan and an option for VX-850. Even though we retain some co-promotion rights, to the extent that our collaborative partners have commercial rights to our products, any revenues we receive from those products will depend primarily on

the sales and marketing efforts of others.

IF WE INCUR PRODUCT LIABILITY EXPENSES, OUR EARNINGS COULD BE NEGATIVELY IMPACTED.

Our business will expose us to potential product liability risks that arise from the testing, manufacturing and sales of our products. In addition to direct expenditures for damages, settlement and defense costs, there is the possibility of adverse publicity as a result of product liability claims. These risks will increase as our products receive regulatory approval and are commercialized. We currently carry $10 million (aggregate) of product liability insurance. This level of insurance may not be sufficient. Moreover, we may not be able to maintain our existing levels of insurance or be able to obtain or maintain additional insurance that we may need in the future on acceptable terms.

In addition, our research and development activities may from time to time involve the controlled use of hazardous materials, including hazardous chemicals and radioactive materials. Accordingly, we are subject to federal, state and local laws governing the use, handling and disposal of these materials. Although we believe that our safety procedures for handling and disposing of hazardous materials comply with regulatory requirements, we cannot completely eliminate the risk that accidental contamination or injury from these materials could expose us to significant liability.

EVENTS WITH RESPECT TO OUR SHARE CAPITAL COULD CAUSE THE PRICE OF OUR COMMON STOCK TO DECLINE.

Sales of substantial amounts of our common stock in the open market, or the availability of such shares for sale, could adversely affect the price of our common stock. As of December 31, 2000, we had 59,612,816 shares of common stock outstanding, excluding shares reserved for issuance upon the exercise of outstanding stock options, employee stock purchase and 401(k) plans and upon conversion of our outstanding notes. As of December 31, 2000, we had granted stock options to purchase 12,195,000 shares of our common stock at a weighted average exercise price of approximately $24.35 per share, subject to adjustment in certain circumstances. Of this total, 5,194,000 were currently exercisable at a weighted average exercise price of approximately $11.84 per share. The shares of our common stock that may be issued under the options will generally be freely tradeable or transferable pursuant to an effective registration statement.

WE HAVE ADOPTED ANTI-TAKEOVER PROVISIONS THAT MAY FRUSTRATE ANY ATTEMPT TO REMOVE OR REPLACE OUR CURRENT MANAGEMENT.

Our corporate charter and by-law provisions and stockholder rights plan may discourage certain types of transactions involving an actual or potential change of control of Vertex which might be beneficial to the company or its securityholders. Our charter provides for staggered terms for the members of the Board of Directors. Our by-laws grant the directors a right to adjourn annual meetings of stockholders, and certain provisions of the by-laws may be amended only with an 80% stockholder vote. Pursuant to our stockholder rights plan, each share of common stock has an associated preferred share purchase 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. We may issue shares of any class or series of preferred stock in the future without stockholder approval and upon such terms as our Board of Directors may determine. The rights of the holders of common stock will be subject to, and may be adversely affected by, the rights of the holders of any class or series of preferred stock that may be issued in the future. As a result, shareholders or other parties may find it more difficult to remove or replace our current management.

OUR STOCK PRICE MAY FLUCTUATE BASED ON FACTORS BEYOND OUR CONTROL.

Market prices for securities of companies such as Vertex are highly volatile. Within the 12 months ended December 31, 2000 our common stock traded between $11.68 and $99.25. The market for our stock, like that of other companies in the biotechnology field, has from time to time experienced significant price and volume fluctuations that are unrelated to our operating performance. The future market price of our securities could be significantly and adversely affected by factors such as:

- announcements of results of clinical trials;

- technological innovations or the introduction of new products by our competitors;

- government regulatory action;

- public concern as to the safety of products developed by others;

- developments in patent or other intellectual property rights or announcements relating to these matters;

- developments in domestic and international governmental policy or regulation, for example relating to intellectual property rights; and

- developments and market conditions for pharmaceutical and biotechnology stocks, in general.

OUR OUTSTANDING INDEBTEDNESS MAY INCREASE OUR COSTS AND MAKE IT MORE DIFFICULT TO OBTAIN ADDITIONAL FINANCING.

As of December 31, 2000, we had approximately $347 million in long-term debt. The high level of our indebtedness will impact us by:

- significantly increasing our interest expense and related debt service costs;

- making it more difficult to obtain additional financing for working capital, capital expenditures, debt service requirements or other purposes; and

- constraining our ability to react quickly in an unfavorable economic climate.

ITEM 2. PROPERTIES

We lease an aggregate of approximately 340,000 square feet of laboratory and office space in seven facilities in Cambridge, Massachusetts. The leases have expiration dates ranging from 2001 to 2010. We have the option to extend the lease for our headquarters facility at 130 Waverly Street, Cambridge, for up to two additional terms, ending in 2015 with respect to one portion of the building, and in 2019 for the other portion of the building. The lease for the laboratory and office building adjacent to our headquarters will expire in 2010 with the option to extend the lease for up to two additional terms, ending in 2030. We have entered into another agreement to lease approximately 275,000 square feet of laboratory and office space presently under construction in Kendall Square, Cambridge, Massachusetts. That lease will expire in 2017 with the option to extend the lease for two consecutive terms of 10 years each ultimately expiring in 2037.

We lease approximately 21,000 square feet of laboratory and office space in Milton Park, Abingdon, England, under a lease expiring in 2013, with a right of early termination in 2008, for our U.K. business and research and development activities.

We believe our facilities are adequate for our current needs. We believe we can obtain additional space on commercially reasonable terms.

ITEM 3. LEGAL PROCEEDINGS

Chiron Corporation filed suit on July 30, 1998 against Vertex and Eli Lilly and Company in the United States District Court for the Northern District of California, alleging infringement by the defendants of three U.S. patents issued to Chiron. The infringement action relates to research activities by the defendants in the hepatitis C viral protease field and the alleged use of inventions claimed by Chiron in connection with that research. Chiron has requested damages in an unspecified amount, as well as an order permanently enjoining the defendants from unlicensed use of the claimed Chiron inventions. During 1999, Chiron requested and was granted a reexamination by the U.S. Patent and Trademark Office of all three of the patents involved in the suit. Chiron also requested and, over the opposition of Vertex and Lilly, was granted a stay in the infringement lawsuit, pending the outcome of the patent reexamination. The reexamination process is still ongoing. While the length of the stay, the outcome of the reexamination, the effect of that outcome on the lawsuit and the final outcome of the lawsuit cannot be determined, we maintain that the plaintiff's claims are without merit and intend to defend the lawsuit, if and when it resumes, vigorously.

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, 2000.

PART II

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

Our common stock trades on the Nasdaq Stock 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:

YEAR ENDED DECEMBER 31, 1999:	HIGH	LOW	CLOSE
First quarter	$16.25	$11.25	$12.63
Second quarter	13.19	9.69	12.06
Third quarter	17.41	11.06	15.53
Fourth quarter	18.63	11.69	17.50
YEAR ENDED DECEMBER 31, 2000:			
First quarter	$45.19	$16.50	$23.41
Second quarter	58.00	18.88	52.69
Third quarter	96.00	46.00	84.50
Fourth quarter	99.25	51.50	71.50

The last sale price of the common stock on March 12, 2001, as reported by Nasdaq, was $32.00 per share. As of March 12, 2001, there were approximately 200 holders of record of the common stock (approximately 35,000 beneficial holders).

We have never declared or paid any cash dividends on our common stock, and we currently expect that future earnings, if any, will be retained for use in our business.

RECENT SALES OF UNREGISTERED SECURITIES

On September 15, 2000, the Company issued a call for redemption of its outstanding 5% Convertible Subordinated Notes due March 2007 (the "March Notes"). As of October 4, 2000, all of the March Notes were converted by holders into 4,340,260 shares of common stock at a price of $40.32 per share. The shares of common stock issued upon conversion of the March Notes were issued in reliance on Section 3(a)(9) of the Securities Act of 1933 as securities exchanged by the issuer with its existing security holders exclusively where no commission or other remuneration is paid or given directly or indirectly for soliciting such exchange.

ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data for each of the five years in the period ended December 31, 2000 are derived from our Consolidated Financial Statements. This data should be read in conjunction with our audited financial statements and related notes, and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	YEAR ENDED DECEMBER 31,*				
	2000	1999	1998	1997	1996
	(IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)				
Consolidated Statement of Operations Data:					
Revenues:					
Royalties and product sales	$ 12,036	$ 8,053	--	--	--
Collaborative and other research and development revenues	66,091	42,507	$ 29,055	$ 29,926	$ 13,341
Total revenues	78,127	50,560	29,055	29,926	13,341
Costs and expenses:					
Royalties and product costs	4,082	2,925	--	--	--
Research and development	84,921	72,180	58,668	51,624	35,212
General and administrative	27,806	26,131	18,135	11,430	7,929
License payment	--	--	--	--	15,000
Total costs and expenses	116,809	101,236	76,803	63,054	58,141
Net loss from operations	(38,682)	(50,676)	(47,748)	(33,128)	(44,800)
Interest income, net	17,110	10,434	14,662	13,297	4,795
Debt conversion expense	(14,375)	--	--	--	--
Equity in losses of unconsolidated subsidiary	(550)	(724)	--	--	--
Net loss before cumulative effect of change in accounting principle	$(36,497)	$(40,966)	$(33,086)	$(19,831)	$(40,005)
Cumulative effect of change in accounting principle	(3,161)	--	--	--	--
Net loss	$(39,658)	$(40,966)	$(33,086)	$(19,831)	$(40,005)
Basic and diluted net loss per common share	$ (0.73)	$ (0.80)	$ (0.65)	$ (0.41)	$ (1.06)
Basic and diluted weighted average number of common shares outstanding	54,322	51,036	50,598	48,528	37,596

	DECEMBER 31,				
	2000	1999	1998	1997	1996
Consolidated Balance Sheet Data:					
Cash, cash equivalents and investments	$ 707,424	$ 187,802	$ 245,652	$ 279,671	$130,359
Total assets	772,881	232,445	266,346	295,604	143,499
Obligations under capital leases and debt, excluding current portion	347,313	4,693	7,032	5,905	5,617
Accumulated deficit	(230,485)	(190,827)	(149,861)	(116,775)	(96,944)
Total stockholders' equity	386,897	209,234	246,212	276,001	130,826

* Note: Previously reported financial data for the years ended December 31, 1996 through 1999 has not been restated to give the pro forma effect of the adoption of the provisions of SAB 101 as the effect could not be reasonably determined. See "Note C: Change in Accounting Principle" in the Notes to the Consolidated Financial Statements for further information.

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

We are a biotechnology company that seeks to discover, develop and market small molecule drugs that address major medical needs.

We have seven drug candidates in clinical development to treat viral diseases, inflammation, cancer, autoimmune diseases and neurological disorders. We have created our pipeline using a proprietary approach, information-driven drug design, that integrates advanced biology, chemistry, biophysics and information technologies to make the drug discovery process more efficient and productive.

Our first approved product is Agenerase (amprenavir), an HIV protease inhibitor, which we co-promote with GlaxoSmithKline. We earn a royalty from GlaxoSmithKline from sales of Agenerase. Agenerase received U.S. Food and Drug Administration approval through an expedited review process for the treatment of HIV infection in 1999. Agenerase has also received approval in other countries, including the 15 member states of the European Union and Japan where the drug is sold under the trade name Prozei.

We have significant collaborations with Aventis, Eli Lilly, GlaxoSmithKline, Kissei, Novartis, Schering AG (Germany), Serono and Taisho. These collaborations provide us with financial support and other valuable resources for our research programs, development of our clinical drug candidates, and marketing and sales of our products.

We have incurred operating losses since our inception and expect to incur a loss in 2001. We believe that operating losses will continue beyond 2001 as we are planning to make significant investments in research and development for our other potential products. We expect that losses will fluctuate from year to year and that such fluctuations may be substantial.

In the fourth quarter of 2000, Vertex adopted SAB 101, "Revenue Recognition in Financial Statements" retroactive to January 1, 2000. SAB 101 was issued by the Securities and Exchange Commission in December 1999 and provides guidance related to revenue recognition policies based on interpretations and practices followed by the SEC. Prior to adoption of SAB 101, we recognized revenue from collaborative research and development arrangements as earned under the terms of the arrangements. License payments were recorded as revenue when payment was assured and contractual obligations met. Payments from contractual milestones were recognized when achieved, and product research funding was recorded on a quarterly basis, when research effort was incurred. In adopting SAB 101, we recognize revenue from research and development arrangements over the period of continuing involvement as the lessor of the non-refundable cash received or the result achieved using percentage of completion accounting under Emerging Issues Task Force No. 91-6. Where we have no continuing involvement, we will record nonrefundable license fees as revenue upon receipt and milestone revenue upon achievement of the milestone by the collaborative partner. Pursuant to the adoption of SAB 101, we recorded a cumulative effect of change in accounting principle related to collaborative research and development revenues recognized in prior periods. As a result, we recorded a one-time, non-cash charge of $3,161,000. The impact of our adoption of SAB 101 was to defer revenue recognition for certain portions of revenue previously recognized under our collaborative agreements into future accounting periods. During the year ended December 31, 2000, we recorded as revenue the full amount of the $3,161,000, the cumulative effect of the change in accounting principle. The results of the first three quarters of the fiscal year ending December 31, 2000 have been restated in accordance with SAB 101.

RESULTS OF OPERATIONS

YEAR ENDED DECEMBER 31, 2000 COMPARED WITH YEAR ENDED DECEMBER 31, 1999

Our net loss for 2000 was $39,658,000 or $0.73 per basic and diluted share, including the cumulative effect of a change in accounting principle, compared to $40,966,000 or $0.80 per basic and diluted share in 1999.

Our total revenues increased to $78,127,000 in 2000 from $50,560,000 in 1999. In 2000, revenues consisted of $12,036,000 in royalty and product sales revenue and $66,091,000 in collaborative and other research and development revenue. Revenue in 1999 consisted of $8,053,000 in royalty and product sales revenue and $42,507,000 in collaborative and other research and development revenue.

Royalties and product sales include Agenerase royalty revenue from GlaxoSmithKline as well as sales of commercial drug substance to Kissei in Japan. Agenerase royalty revenue from GlaxoSmithKline was recognized for the first time in 1999 and is based upon worldwide net sales of Agenerase as provided by GlaxoSmithKline.

The growth in collaborative and other research and development revenue in 2000, as compared with 1999, is largely due to new collaborative agreements signed during the year. In May 2000, we agreed with Novartis to collaborate to discover, develop and commercialize small molecule drugs targeted at the kinase protein family. In connection with this contract, we recognized approximately $27,910,000 in revenue during 2000. In December 2000 we entered into a collaboration with Serono to discover, develop and market caspase inhibitors. Previously, in November 1999, we entered into a collaborative agreement with Taisho for our caspase program. In connection with these contracts, we recognized approximately $6,974,000 of revenue in 2000, compared with $3,900,000 in 1999. Additionally, we received and recognized as revenue a $10,000,000 payment from Aventis under a collaborative agreement signed in October 1999 covering the development of VX-740, an orally active inhibitor of interleukin-1 beta converting

enzyme (ICE). In November 2000 we received and recognized as revenue a $3,000,000 milestone from GlaxoSmithKline for the approval of Agenerase by the European Union. As of June 30, 2000, the research support payments from Kissei under the p38 MAP Kinase collaboration ended. Collaborative and other research and development revenue for the year ended December 31, 1999 includes $15,000,000 recognized under the Aventis agreement signed in October 1999 and a $5,000,000 milestone payment received from GlaxoSmithKline for U.S. FDA approval of Agenerase. The balance of collaborative and other research and development revenue for 2000 and 1999 is made up of development reimbursements and research support payments from other collaborative partners.

Total costs and expenses increased to $116,809,000 in 2000 from $101,236,000 in 1999. Royalties and product costs of $4,082,000 consist of royalty payments to G.D. Searle & Co. and the cost of commercial drug substance sold to Kissei. Under the terms of the 1996 license agreement between GlaxoSmithKline, Searle and us, we agreed to pay Searle a royalty on sales of Agenerase.

Research and development expenses increased to $84,921,000 in 2000 from $72,180,000 in 1999 principally due to the continued expansion of our research and development operations and an increase in the number of drug development candidates. Related to our expansion were increases in personnel, facilities expenses, equipment depreciation and increased technology license payments for access to gene database information. The expenses associated with the expansion were partially offset by a decrease in external development activities associated with certain drug candidates. We anticipate research and development expenses to continue to increase as personnel are added and research and development activities are expanded to accommodate our existing collaborations and additional commitments we may undertake in the future.

Sales, general and administrative expenses were $27,806,000 in 2000 compared with $26,131,000 in 1999. The increase was primarily a result of increased personnel and professional expenses. Additionally, marketing expenses associated with Agenerase increased in 2000. We expect sales, general and administrative expenses to continue to increase as we continue to grow.

Interest income increased by $16,591,000 to $27,679,000 in 2000 compared with 1999 due to a higher level of cash and investments throughout the year as a result of the proceeds received from the issuance of $520,000,000 of convertible subordinated notes in March and September of 2000.

Interest expense increased by $9,915,000 to $10,569,000 for the year ended December 31, 2000 from $654,000 for the year ended December 31, 1999. The increase is due to interest expense associated with the convertible subordinated notes issued in March and September of 2000.

In the third quarter of 2000 we recognized debt conversion expense of $14,375,000, representing the "make-whole" payment resulting from the call of our $175,000,000 aggregate principal amount of 5% Convertible Subordinated Notes due March 2007 ("March Notes"). As a result of the call for redemption, the holders of the March Notes were entitled to a "make-whole" payment of $82.14 per $1,000 principal amount of notes.

At December 31, 2000, we had a 23.5% equity investment in Altus of approximately $1,726,000. Using the equity method of accounting, we recorded $550,000 as our share of the loss in Altus for the twelve months ended December 31, 2000, compared with $724,000 for the twelve months ended December 31, 1999. Altus is expected to incur additional losses in 2001 and we will record our proportionate share of losses against the investment balance.

YEAR ENDED DECEMBER 31, 1999 COMPARED WITH YEAR ENDED DECEMBER 31, 1998

The net loss for 1999 was $40,966,000 or $0.80 per basic and diluted share compared to $33,086,000 or $0.65 per basic and diluted share in 1998.

Our total revenues were $50,560,000 in 1999 as compared to $29,055,000 in 1998. In 1999, revenues consisted of $8,053,000 in royalty and product sales revenue and $42,507,000 in collaborative and other research and development revenue. Revenue in 1998 consisted of $29,055,000 in collaborative and other research and development revenue.

Collaborative and other research and development revenue increased in 1999, as compared with 1998, due primarily to new collaborative agreements and larger milestone payments earned during the year. In 1999, we earned a $5,000,000 milestone payment from GlaxoSmithKline for U.S. FDA approval of Agenerase. We recorded $15,000,000 in collaborative revenue from Aventis as part of an expanded collaborative agreement covering the development of VX-740. In connection with a collaborative agreement signed with Taisho for our caspase program, we recognized $3,000,000 for prior research costs and approximately $900,000 in product research funding. Included in 1998 collaborative and other research and development revenue is a $6,000,000 payment from Schering earned in connection with the signing of a collaborative agreement for our neurophilins ligand program and a $3,000,000 milestone

payment from GlaxoSmithKline for the NDA filing for Agenerase. Total research funding from our collaborative partners decreased by approximately $1,380,000 in 1999 primarily because the research funding requirements under the GlaxoSmithKline agreement ended on December 31, 1998.

Total costs and expenses increased to $101,236,000 in 1999 compared to $76,803,000 in 1998. Royalties and product costs of $2,925,000 in 1999 consist of royalty payments to Searle and the cost of commercial drug substance sold to Kissei. Research and development expenses increased to $72,180,000 in 1999 from $58,668,000 in 1998. The increase was mainly due to expansion of our operations in the U.K., as well as increased development expenses due to the commencement of clinical trials in the second half of 1998 and the increase in other development activities associated with our IMPDH inhibitor VX 497, for psoriasis and hepatitis C, our neurophilins drug candidate, timcodar, for diabetic neuropathy, and our p38 MAP kinase inhibitor, VX-745, for inflammatory diseases. Sales, general and administrative expenses increased to $26,131,000 in 1999 from $18,135,000 in 1998, primarily as a result of increased administrative requirements of our growing research and development operation, legal expenses associated with expansion of our intellectual property position and marketing expenses associated with Agenerase.

Interest income decreased $4,255,000 to $11,088,000 in 1999 from $15,343,000 in 1998 due to lower levels of cash and investments throughout the year as well as lower yields earned on investment securities. Interest expense decreased slightly in 1999 to $654,000 from $681,000 in 1998, primarily due to lower levels of equipment financing during 1999.

In February 1999, we restructured our investment in Altus, which was a majority owned subsidiary. As part of the transaction, we provided Altus $3,000,000 of cash and surrendered our shares in Altus preferred stock in exchange for two new classes of preferred stock and warrants. At December 31, 1999, we had a 29.5% equity investment in Altus of approximately $2,276,000. For the year ending December 31, 1999, we recorded $724,000 as our share of Altus' losses.

LIQUIDITY AND CAPITAL RESOURCES

Our operations have been funded principally through strategic collaborative agreements, public offerings and private placements of our equity and debt securities, equipment lease financing, and investment income. With the approval and launch of Agenerase in April 1999, we began receiving product royalty revenues. During the twelve months ended December 31, 2000, we completed a private placement of $175,000,000 of 5% Convertible Subordinated Notes due March 2007 and $345,000,000 of 5% Convertible Subordinated Notes due September 2007. We have continued to increase and advance products in our research and development pipeline. Consequently, we expect to incur losses on a quarterly and annual basis as we continue to develop existing and future compounds and to conduct clinical trials of potential drugs. We also expect to incur substantial administrative and commercialization expenditures in the future and additional expenses related to filing, prosecution, defense and enforcement of patent and other intellectual property rights.

We expect to finance these substantial cash needs with future payments under our existing and future collaborative agreements, royalties from the sales of Agenerase, existing cash and investments of $707,424,000 at December 31, 2000, together with investment income earned thereon, and facilities and equipment financing. To the extent that funds from these sources are not sufficient to fund our 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.

Our aggregate cash and investments increased by $519,622,000 during the twelve months ended December 31, 2000 to $707,424,000. Cash used by operations was $16,644,000 during the same period. We received $37,458,000 from Novartis in connection with the collaborative agreement signed in May of 2000 of which approximately $27,910,000 was recognized as revenue during the twelve months ended December 31, 2000. Under the collaborative agreement with Aventis signed in October 1999, we received a $10,000,000 payment in May 2000, all of which was recognized as revenue during 2000. We continue to invest in equipment and leasehold improvements for facilities to meet the operating needs associated with the growth in our headcount. In 2000, property and equipment expenditures were $11,913,000. Cash provided by financing activities for the twelve months ended December 31, 2000 was $544,031,000, including $503,962,000 in net proceeds from the issuance of $520,000,000 of convertible subordinated notes in March and September of 2000, as well as $42,438,000 from the issuance of common stock under employee stock option and benefit plans.

On September 15, 2000, we announced the call of our March Notes. As of December 31, 2000, $175,000,000 of the March Notes had been converted into 4,340,260 shares of common stock at a price of $40.32 per share. We reclassified $4,917,000 of related unamortized deferred debt issuance costs to stockholders' equity as part of the conversion in 2000. In connection with the call for redemption, the holders of the notes were entitled to a "make-whole" payment of $82.14 per $1,000 principal amount of notes, which resulted in a one-time charge to earnings of $14,375,000.

During 2000, we entered into two new collaborative agreements. In May 2000, we entered into an agreement with Novartis to

collaborate on the discovery, development, and commercialization of small molecule drugs directed at targets in the kinase protein family. Under the agreement, Novartis agreed

to pay us approximately $600,000,000 in pre-commercial payments, comprised of $15,000,000 paid upon signing of the agreement, up to $200,000,000 in product research funding over six years and up to approximately $400,000,000 in further license fees and milestone payments. These amounts are based on the development of eight drug candidates. In addition, Novartis created a $200,000,000 loan facility to support certain clinical studies which we may draw down in increments up to $25,000,000 for each drug candidate. The loan is interest free and Novartis will forgive the full amount of any advances if Novartis accepts the drug candidate for development under our agreement with Novartis.

In December 2000, we entered into an agreement with Serono to collaborate on the discovery, development, and commercialization of caspase inhibitors. Under the agreement, we could receive up to $95,000,000 in pre-commercial payments, comprised of $5,000,000 in payments for prior research, up to $20,000,000 in product research funding over five years and up to $70,000,000 in further license fees and milestone payments. These amounts are based on the development of more than one drug candidate.

LEGAL PROCEEDINGS

Chiron Corporation filed suit on July 30, 1998 against Vertex and Eli Lilly and Company in the United States District Court for the Northern District of California, alleging infringement by the defendants of three U.S. patents issued to Chiron. The infringement action relates to research activities by the defendants in the hepatitis C viral protease field and the alleged use of inventions claimed by Chiron in connection with that research. Chiron has requested damages in an unspecified amount, as well as an order permanently enjoining the defendants from unlicensed use of the claimed Chiron inventions. During 1999, Chiron requested and was granted a reexamination by the U.S. Patent and Trademark Office of all three of the patents involved in the suit. Chiron also requested and, over the opposition of Vertex and Lilly, was granted a stay in the infringement lawsuit, pending the outcome of the patent reexamination. That reexamination process is still ongoing. While the length of the stay, the outcome of the reexamination, the effect of that outcome on the lawsuit and the final outcome of the lawsuit cannot be determined, we maintain that the plaintiff's claims are without merit and intend to defend the lawsuit, if and when it resumes, vigorously.

RECENT ACCOUNTING PRONOUNCEMENTS

In June 2000, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standard ("SFAS") No. 138, "Accounting for Certain Derivative Instruments an amendment of SFAS No. 133" ("Accounting for Certain Derivative Instruments and Hedging Activities"). This statement establishes accounting and reporting standards for derivative instruments embedded in other contracts (collectively referred to as "derivatives") and for hedging activities. The statement requires companies to recognize all derivatives as either assets or liabilities, with the instruments measured at fair value. The accounting for changes in fair value, gains or losses, depends on the intended use of the derivative and its resulting designation. We will adopt SFAS No. 138 in 2001, in accordance with SFAS No. 137, which deferred the effective date of SFAS No. 133. To date, we have not engaged in derivative or hedging activities and accordingly do not believe the adoption of SFAS No. 138 will have a material impact on our financial statements and related disclosures.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Vertex owns financial instruments that are sensitive to market risks as part of its investment portfolio. The investment portfolio is used to preserve Vertex's capital until it is required to fund operations, including Vertex's research and development activities. None of these market-risk sensitive instruments are held for trading purposes. Vertex does not own derivative financial instruments in its investment portfolio.

INTEREST RATE RISK

Vertex invests its cash in a variety of financial instruments, principally securities issued by the U.S. government and its agencies, investment grade corporate and money market instruments. These investments are denominated in U.S. dollars. These bonds are subject to interest rate risk, and could decline in value if interest rates fluctuate. Vertex's investment portfolio includes only marketable securities with active secondary or resale markets to help ensure portfolio liquidity and Vertex has implemented guidelines limiting the duration of investments. Due to the conservative nature of these instruments, Vertex does not believe that it has a material exposure to interest rate risk.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by Item 8 is contained on pages F-1 through F-24 of this Report.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING 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 Vertex's 2001 Annual Meeting of Stockholders, to be filed with the Commission on or about April 3, 2001 (the "2001 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 2001 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 2001 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 2001 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:

(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 as Exhibit 3.1 to Vertex's 1997 Annual Report on Form 10-K (File No. 000-19319) and incorporated herein by reference).
3.2	Articles of Amendment filed with the Commonwealth of Massachusetts on June 4, 1997 (filed as Exhibit 3.2 to Vertex's 1997 Annual Report on Form 10- K (File No. 000-19319) and incorporated herein by reference).
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 as Exhibit 3.3 to Vertex's 1997 Annual Report on Form 10-K (File No. 000-19319) and incorporated herein by reference).
3.4	By-laws of Vertex as amended and restated as of March 12, 2001 (filed herewith).
4.1	Specimen stock certificate (filed as Exhibit 4.1 to Vertex'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 Vertex'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 Vertex's 1996 Annual Report on Form 10-K (File No. 000-19319) and incorporated herein by reference).
4.4	Indenture dated as of September 19, 2000 between Vertex and State Street Bank and Trust Company (filed as Exhibit 4.1 to Vertex's Quarterly Report on Form 10-Q for the quarter ended September 30, 2000 (File No. 000-19319) and incorporated herein by reference).
4.5	Supplemental Indenture dated as of December 12, 2000 between Vertex and State Street Bank and Trust Company (filed as Exhibit 4.2 to Pre-Effective Amendment No. 1 to the Form S-3 filed by Vertex (Registration No. 333-49844) and incorporated herein by reference.
4.6	Registration Rights Agreement dated as of September 19, 2000 among Vertex and Merrill Lynch & Co., Merrill Lynch, Pierce, Fenner & Smith Incorporated, Credit Suisse First Boston Corporation, Robertson Stephens, Inc., Chase Securities Inc. and J.P. Morgan Securities Inc., as Initial Purchasers (filed as Exhibit 4.2 to Vertex's Quarterly Report on Form 10-Q for the quarter ended September 30, 2000 (File No. 000-19319) and incorporated herein by reference).
10.1	1991 Stock Option Plan, as amended and restated as of September 14, 1999 (filed as Exhibit 10.1 to Vertex 1999

EXHIBIT NUMBER	EXHIBIT DESCRIPTION
10.5	Form of Employee Stock Purchase Agreement (filed as Exhibit 10.3 to Vertex's Registration Statement on Form S-1 (Registration No. 33-40966) or amendments thereto and incorporated herein by reference).*
10.6	Form of Employee Non-Disclosure and Inventions Agreement (filed as Exhibit 10.4 to Vertex's Registration Statement on Form S-1 (Registration No. 33-40966) or amendments thereto and incorporated herein by reference).
10.7	Form of Executive Employment Agreement executed by Joshua S. Boger and Vicki L. Sato (filed as Exhibit 10.6 to Vertex's 1994 Annual Report on Form 10-K (File No. 000-19319) and incorporated herein by reference).*
10.8	Form of Amendment to Employment Agreement executed by Joshua S. Boger and Vicki L. Sato (filed as Exhibit 10.1 to Vertex's Quarterly Report on Form 10-Q for the quarter ended June 30, 1995 (File No. 000-19319) and incorporated herein by reference).*
10.9	Executive Employment Agreement between Vertex and Iain P.M. Buchanan (filed herewith).*
10.10	Agreement dated December 21, 2000 between Vertex and Richard H. Aldrich (filed herewith).*
10.11	Lease dated March 3, 1995, between Fort Washington Realty Trust and Vertex, relating to the premises at 130 Waverly Street, Cambridge, MA (filed as Exhibit 10.15 to Vertex's 1994 Annual Report on Form 10-K (File No. 000-19319) and incorporated herein by reference).
10.12	First Amendment to Lease dated March 3, 1995 between Fort Washington Realty Trust and Vertex (filed as Exhibit 10.15 to Vertex's 1995 Annual Report on Form 10-K (File No. 000-19319) and incorporated herein by reference).
10.13	Second Amendment to Lease and Option Agreement dated June 12, 1997 between Fort Washington Realty Trust and Vertex (filed as Exhibit 10.17 to Vertex 1999 Annual Report on Form 10-K (File No. 000-19319) and incorporated herein by reference).
10.14	Third, Fourth and Fifth Amendments to Lease between Fort Washington Realty Trust and Vertex (with certain confidential information deleted) (filed herewith).
10.15	Lease by and between Trustees of Fort Washington Realty Trust, Landlord, and Vertex, executed September 17, 1999 (filed as Exhibit 10.27 to Vertex's Quarterly Report on Form 10-Q for the quarter ended September 30, 1999, with certain confidential information deleted (File No. 000-19319), and incorporated herein by reference).
10.16	Lease between Kendall Square, LLC, Landlord, and Vertex, executed January 18, 2001 (with certain confidential information deleted) (filed herewith).

EXHIBIT NUMBER	EXHIBIT DESCRIPTION
10.20	Research and Development Agreement between Vertex and Eli Lilly and Company effective June 11, 1997 (filed with certain confidential information deleted as Exhibit 10.1 to Vertex's Quarterly Report on Form 10-Q for the quarter ended June 30, 1997, (File No. 000-19319) and incorporated herein by reference).
10.21	Research and Development Agreement between Vertex and Kissei Pharmaceutical Co. Ltd. effective September 10, 1997 (filed, with certain confidential information deleted, as Exhibit 10.1 to Vertex's Quarterly Report on Form 10-Q for the quarter ended September 30, 1997, (File No. 000-19319) and incorporated herein by reference).
10.22	Research Agreement between Vertex and Schering AG dated as of August 24, 1998 (filed, with certain confidential information deleted, as Exhibit 10.1 to Vertex's Quarterly Report on Form 10-Q for the quarter ended September 30, 1998, (File No. 000-19319) and incorporated herein by reference).
10.23	License, Development and Commercialization Agreement between the Company and Hoechst Marion Roussel Deutschland GmbH dated September 1, 1999 (filed with certain confidential information deleted as Exhibit 10.27 to Vertex's Quarterly Report on Form 10-Q for the quarter ended September 30, 1999, (File No. 000-19319), and incorporated herein by reference).
10.24	Collaboration and Option Agreement between Vertex and Taisho Pharmaceutical Co., Ltd. dated November 30, 1999 (filed, with certain confidential information deleted, as Exhibit 10.27 to Vertex's 1999 Form 10-K, (File No. 000-19319) and incorporated herein by reference).
10.25	Research and Early Development Agreement between Vertex and Novartis Pharma AG dated May 8, 2000 (filed, with certain confidential information deleted, as Exhibit 10.1 to Vertex's Quarterly Report on Form 10-Q for the quarter ended March 31, 2000, (File No. 000-19319) and incorporated herein by reference).
10.26	Research Agreement between Vertex and Laboratoires Serono S.A. dated December 11, 2000 (with certain confidential information deleted) (filed herewith).
21	Subsidiaries of Vertex (filed as Exhibit 21 to Vertex's 1999 Form 10-K, (File No. 000-19319) and incorporated herein by reference).
23	Consent of Independent Accountants (filed herewith).

* Compensatory plan or agreement applicable to management and employees.

(b) Reports on Form 8-K. The following reports on Form 8-K were filed by Vertex during the quarter ended December 31, 2000:

Report dated October 5, 2000 reporting the conversion of our 5% Convertible Subordinated Notes Due March 2007.

Report dated December 21, 2000 reporting the resignation of Richard H. Aldrich from his position as Senior Vice President and Chief Business Officer of the Company.

SIGNATURES

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

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ JOSHUA S. BOGER

Joshua S. Boger
CHIEF EXECUTIVE OFFICER

March 23, 2001

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

NAME	TITLE	DATE
/s/ JOSHUA S. BOGER Joshua S. Boger	Director, Chairman and Chief Executive Officer (Principal Executive Officer)	March 23, 2001
/s/ JOHANNA MESSINA POWER Johanna Messina Power	Controller (Principal Accounting Officer)	March 23, 2001
/s/ BARRY M. BLOOM Barry M. Bloom	Director	March 23, 2001
/s/ ROGER W. BRIMBLECOMBE Roger W. Brimblecombe	Director	March 23, 2001
/s/ DONALD R. CONKLIN Donald R. Conklin	Director	March 23, 2001
/s/ BRUCE I. SACHS Bruce I. Sachs	Director	March 23, 2001
/s/ CHARLES A. SANDERS Charles A. Sanders	Director	March 23, 2001
/s/ ELAINE S. ULLIAN Elaine S. Ullian	Director	March 23, 2001

VERTEX PHARMACEUTICALS INCORPORATED

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Stockholders of Vertex Pharmaceuticals Incorporated:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, stockholders' equity and comprehensive loss and cash flows present fairly, in all material respects, the financial position of Vertex Pharmaceuticals Incorporated and its subsidiaries at December 31, 2000 and 1999, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2000 in conformity with accounting principles generally accepted in the United States of America. 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 of these statements in accordance with auditing standards generally accepted in the United States of America, which 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, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note C to the consolidated financial statements, during the year ended December 31, 2000 the Company changed its method of accounting for revenue recognition.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
February 22, 2001

VERTEX PHARMACEUTICALS INCORPORATED

CONSOLIDATED BALANCE SHEETS

	DECEMBER 31,	
	2000	1999
	(DOLLARS IN THOUSANDS, EXCEPT SHARE AND PER SHARE AMOUNTS)	
ASSETS		
Current assets:		
Cash and cash equivalents	$322,090	$ 31,548
Short-term investments, available for sale	66,509	84,080
Accounts receivable	12,262	5,956
Prepaid expenses	2,325	1,439
Total current assets	403,186	123,023
Restricted cash	9,788	9,788
Long-term investments, available for sale	318,825	72,174
Property and equipment, net	28,149	24,480
Investment in equity affiliate	1,726	2,276
Other assets	11,207	704
Total assets	$772,881	$232,445
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 3,847	$ 2,979
Accrued expenses	14,994	11,173
Accrued interest	4,879	--
Deferred revenue	12,574	2,000
Obligations under capital lease and debt	2,377	2,366
Total current liabilities	38,671	18,518
Obligations under capital lease and debt, excluding current portion	2,313	4,693
Convertible subordinated notes	345,000	--
Total liabilities	385,984	23,211
Commitments (Note K)		
Stockholders' equity:		
Preferred stock, $0.01 par value; 1,000,000 shares authorized; none issued and outstanding at December 31, 2000 and 1999, respectively	--	--
Common stock, $0.01 par value; 100,000,000 shares authorized; 59,612,816 and 51,370,728 shares issued and outstanding at December 31, 2000 and 1999, respectively	596	514
Additional paid-in capital	613,166	400,631
Deferred compensation, net	(61)	(114)
Accumulated other comprehensive income (loss)	3,681	(970)
Accumulated deficit	(230,485)	(190,827)
Total stockholders' equity	386,897	209,234
Total liabilities and stockholders' equity	$722,881	$232,445

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

VERTEX PHARMACEUTICALS INCORPORATED

CONSOLIDATED STATEMENTS OF OPERATIONS

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
	(IN THOUSANDS, EXCEPT PER SHARE DATA)		
Revenues:			
Royalties and product sales	$ 12,036	$ 8,053	$ --
Collaborative and other research and development revenues	66,091	42,507	29,055
Total revenues	78,127	50,560	29,055
Costs and expenses:			
Royalties and product costs	4,082	2,925	--
Research and development	84,921	72,180	58,668
Sales, general and administrative	27,806	26,131	18,135
Total costs and expenses	116,809	101,236	76,803
Net loss from operations	(38,682)	(50,676)	(47,748)
Interest income	27,679	11,088	15,343
Interest expense	(10,569)	(654)	(681)
Debt conversion expense	(14,375)	--	--
Equity in losses of unconsolidated subsidiary	(550)	(724)	--
Net loss before cumulative effect of change in accounting principle	$(36,497)	$(40,966)	$(33,086)
Cumulative effect of change in accounting principle	(3,161)	--	--
Net loss	$(39,658)	$(40,966)	$(33,086)
Basic and diluted net loss per common share before cumulative effect of change in accounting principle	$ (0.67)	$ (0.80)	$ (0.65)
Cumulative effect of change in accounting principle--basic and diluted	$ (0.06)	--	--
Basic and diluted net loss per common share	$ (0.73)	$ (0.80)	$ (0.65)
Basic and diluted weighted average number of common shares outstanding	54,322	51,036	50,598

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

VERTEX PHARMACEUTICALS INCORPORATED
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE LOSS

	COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	DEFERRED COMPENSATION	ACCUMULATED DEFICIT	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)
	SHARES	AMOUNT				
				(IN THOUSANDS)		
Balance, December 31, 1997	50,432	$504	$392,237	$ (117)	$(116,775)	$ 152
Net change in unrealized holding (gains)/losses on investments						502
Net loss					(33,086)	
Comprehensive loss						
Issuances of common stock:						
Benefit plans	286	3	2,783			
Equity compensation for services rendered			59	(82)		
Amortization of deferred compensation				32		
Balance, December 31, 1998	50,718	507	395,079	(167)	(149,861)	654
Net change in unrealized holding (gains)/losses on investments						(1,672)
Translation adjustments						48
Net loss					(40,966)	
Comprehensive loss						
Issuances of common stock:						
Benefit plans	652	7	5,493			
Equity compensation for services rendered			59			
Amortization of deferred compensation				53		
Balance, December 31, 1999	51,370	514	400,631	(114)	(190,827)	(970)
Net change in unrealized holding (gains)/losses on investments						5,167
Translation adjustments						(516)
Net loss					(39,658)	
Comprehensive loss						
Issuance of common stock:						
Benefit plans	3,903	39	42,399			
Convertible subordinated notes	4,340	43	170,040			
Equity compensation for services rendered			96			
Amortization of deferred compensation				53		
Balance, December 31, 2000	59,613	$596	$613,166	$ (61)	$(230,485)	$3,681

	COMPREHENSIVE INCOME (LOSS)	TOTAL STOCKHOLDERS' EQUITY
	(IN THOUSANDS)	
Balance, December 31, 1997		$276,001
Net change in unrealized holding (gains)/losses on investments	$ 502	502
Net loss	(33,086)	(33,086)
Comprehensive loss	(32,584)	
Issuances of common stock:		
Benefit plans		2,786
Equity compensation for services rendered		(23)
Amortization of deferred compensation		32
Balance, December 31, 1998		246,212
Net change in unrealized holding (gains)/losses on investments	(1,672)	(1,672)
Translation adjustments	48	48
Net loss	(40,966)	(40,966)
Comprehensive loss	(42,590)	
Issuances of common stock:		
Benefit plans		5,500
Equity compensation for services rendered		59
Amortization of deferred compensation		53
Balance, December 31, 1999		209,234
Net change in unrealized holding (gains)/losses on investments	5,167	5,167
Translation adjustments	(516)	(516)
Net loss	(39,658)	(39,658)
Comprehensive loss	$(77,597)	
Issuance of common stock:		
Benefit plans		42,438
Convertible subordinated notes		170,083
Equity compensation for services rendered		96
Amortization of deferred compensation		53
Balance, December 31, 2000		$386,897

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

VERTEX PHARMACEUTICALS INCORPORATED

CONSOLIDATED STATEMENTS OF CASH FLOWS

	YEARS ENDED DECEMBER 31,		
	2000	1999	1998
	(IN THOUSANDS)		
Cash flows from operating activities:			
Net loss	$ (39,658)	$ (40,966)	$ (33,086)
Adjustments to reconcile net loss to net cash used in operating activities:			
Cumulative effect of change in accounting principle	3,161	--	--
Depreciation and amortization	9,095	6,206	4,520
Amortization of deferred compensation	53	53	32
Equity compensation for services rendered	96	59	59
Realized (gains)/losses on investments	270	655	(547)
Equity in losses of unconsolidated subsidiary	550	724	--
Changes in operating assets and liabilities:			
Accounts receivable	(6,306)	(4,494)	--
Prepaid expenses	(886)	155	(1,104)
Accounts payable	868	171	(1,439)
Accrued expenses	3,821	3,631	1,157
Accrued interest	4,879	--	--
Deferred revenue	7,413	2,000	(556)
Net cash used in operating activities	(16,644)	(31,806)	(30,964)
Cash flows from investing activities:			
Purchases of investments	(1,312,765)	(365,970)	(507,540)
Sales and maturities of investments	1,088,582	428,872	495,323
Expenditures for property and equipment	(11,913)	(16,210)	(7,901)
Restricted cash	--	(7,472)	--
Investment in equity affiliate	--	(3,000)	--
Other assets	(233)	142	(276)
Net cash (used in) provided by investing activities	(236,329)	36,362	(20,394)
Cash flows from financing activities:			
Repayment of capital lease obligations and debt	(2,369)	(2,725)	(2,716)
Proceeds from debt	--	--	4,085
Proceeds from the sale of convertible subordinated notes	520,000	--	--
Costs associated with the sale of convertible subordinated notes	(16,038)	--	--
Proceeds from other issuances of common stock	42,438	5,500	2,704
Net cash provided by financing activities	544,031	2,775	4,073
Effect of changes in exchange rates on cash	(516)	48	--
Net increase (decrease) in cash and cash equivalents	290,542	7,379	(47,285)
Cash and cash equivalents at beginning of year	31,548	24,169	71,454
Cash and cash equivalents at end of year	$ 322,090	$ 31,548	$ 24,169
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ 19,214	$ 654	$ 681
Noncash financing activities:			
Conversion of convertible subordinated notes, net of unamortized deferred debt issuance cost of $4,917,000	$ 170,083	$ --	$ --

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

A. THE COMPANY

Vertex Pharmaceuticals Incorporated ("Vertex" or the "Company") seeks to use a range of drug discovery technologies to design, develop and market small molecule drugs that address major medical needs. The Company is headquartered in Cambridge, Massachusetts and operates primarily in the U.S. Vertex also has a research facility in the U.K. The Company has twelve drug candidates in development. The Company has significant collaborations with Aventis S.A., Lilly & Company, GlaxoSmithKline, Kissei Pharmaceuticals Co. Ltd, Novartis Pharma AG, Schering AG (Germany), Serona S.A. and Taisho Pharmaceutical Co. These collaborations provide them with financial support and other valuable resources for their programs, development of clinical drug candidates and marketing and sales of their products. The Company's first product, the HIV protease inhibitor Agenerase-Registered Trademark- (amprenavir), received accelerated approval from the U.S. Food and Drug Administration and was launched in May 1999. Agenerase is marketed in the U.S. by GlaxoSmithKline ("Glaxo") and is co-promoted by Vertex. The Company expects to incur operating losses over the next two years and possibly longer, as a result of expenditures for its research and development programs.

The consolidated financial statements include the accounts of the Company and the following subsidiaries: Vertex Securities Corp., Vertex Pharmaceuticals (Europe) Limited and, until January 1999, Altus Biologics, Inc. ("Altus"). The Company restructured its majority ownership investment in Altus during 1999.

The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, rapid technological change and competition, dependence on key personnel, uncertainty of protection of proprietary technology, clinical trial uncertainty, dependence on collaborative partners, share price volatility, the possible need to obtain additional funding, uncertainties relating to pharmaceutical pricing and reimbursement, limited experience in manufacturing, sales and marketing, potential product liability and the need for compliance with government regulations.

B. ACCOUNTING POLICIES

BASIS OF PRESENTATION

The consolidated financial statements reflect the operations of the Company and its wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated. Investments in affiliated companies which are 50% owned or less and where the Company does not exercise control are accounted for using the equity method.

USE OF ESTIMATES

The preparation of consolidated 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 consolidated financial statements and the reported amounts of revenues and expenses during the reported periods. Significant estimates in these consolidated financial statements include useful lives for depreciation and amortization and contract revenues and related costs used in estimates to complete under percentage of completion accounting. 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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

B. ACCOUNTING POLICIES (CONTINUED)

may be affected by shifts in investment portfolio maturities as well as by actual cash receipts and disbursements.

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 accumulated other comprehensive income (loss), which is a separate component of stockholder's 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 interest income.

CONCENTRATION OF CREDIT RISK

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. The Company has no significant off balance sheet concentration of credit risk, such as foreign exchange contracts, option contracts or other foreign hedging arrangements.

GlaxoSmithKline represented approximately 26% and 52% of the Company's accounts receivable balance at December 31, 2000 and 1999, respectively, while Kissei Pharmaceuticals, Co., Ltd. represented approximately 14% and 29% of the Company's accounts receivable balance at December 31, 2000 and 1999, respectively. Management believes that credit risks associated with these collaborative partners are not significant.

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 computers and purchased software. Leasehold improvements are amortized over the lesser of the useful life of the improvements or the remaining life of the lease. 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 (loss).

STOCK-BASED COMPENSATION

In accounting for its stock-based compensation plans, the Company applies Accounting Principles Board Opinion No. 25 ("APB 25") and related interpretations for all awards granted to employees. Under APB 25, when the exercise price of options granted to employees under these plans equals the market price of the common stock on the date of grant, no compensation cost is required. When the exercise price of options granted to employees under these plans is less than the market price of the common stock on the date of grant, compensation costs are expensed over the vesting period. For stock options granted to nonemployees, the Company recognizes compensation costs in accordance with the requirements of Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based

B. ACCOUNTING POLICIES (CONTINUED)

Compensation" ("SFAS 123"). SFAS 123 requires that companies recognize compensation expense for grants of stock, stock options and other equity instruments based on fair value.

REVENUE RECOGNITION

The Company enters into licensing and development agreements with collaborative partners for the development of small molecule drugs that address major medical needs. The terms of the agreements typically include nonrefundable license fees, funding of research and development, payments based upon the achievement of certain milestones and royalties on product sales.

Nonrefundable license fees, milestones, and collaborative research and development revenues under collaborative agreements, where the Company has continuing involvement, are recognized as revenue over the period of continuing involvement, using the model prescribed by Emerging Issues Task Force Issue No 91-6 (EITF 91-6). Under that model, revenue is recognized for nonrefundable license fees, milestones, and collaborative research and development using the lesser of non-refundable cash received or the result

achieved using percentage of completion accounting. Under percentage of completion accounting, revenue is based on the cost of effort since the contract's commencement up to the reporting date, divided by the total expected research and development costs from the contract's commencement to the end of the research and development period, multiplied by the total expected contractual payments under the arrangement. Revisions in cost estimates and expected contractual payments as contracts progress have the effect of increasing or decreasing profits in the current period. Provisions for anticipated losses are made in the period in which they first become determinable. Payments received in advance of being earned are recorded as deferred revenue.

Where the Company has no continuing involvement, it will record nonrefundable license fees as revenue upon receipt and will record milestone revenue upon achievement of the milestone by the collaborative partner.

Royalty revenue is recognized based upon actual net sales of licensed products in licensed territories as provided by the collaborative partner and is generally recognized in the period the sales occur.

Product sales revenue is recognized upon shipment, when title to product and associated risk of loss has passed to the customer.

RESEARCH AND DEVELOPMENT

All research and development costs are expensed as incurred.

ADVERTISING

All advertising costs are expensed as incurred. During the years ended December 31, 2000 and 1999, advertising expenses totaled $1,376,000 and $2,211,000 respectively. The Company did not incur advertising expense in 1998.

INCOME TAXES

Deferred tax assets and liabilities are recognized for the expected future tax consequences, using current tax rates, of temporary differences between the financial statement carrying amounts and the income tax bases of assets and liabilities. A valuation allowance is applied against any net deferred tax

asset if, based on the weighted available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

DEBT ISSUANCE COSTS

Debt issuance costs, costs relating to expenses incurred to complete convertible subordinated debenture offerings, are deferred and amortized based on the effective interest method over the term of the related debt issuance. The amortization expense is included in interest expense on the consolidated statement of operations.

COMPREHENSIVE INCOME

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

FOREIGN CURRENCY TRANSLATION

The functional currency of the Company's foreign subsidiary is the local currency. Assets and liabilities of the foreign subsidiary are remeasured into U.S. dollars at rates of exchange in effect at the end of the year. Revenue and expense amounts are remeasured using the average exchange rates for the period. Net unrealized gains and losses resulting from foreign currency remeasurement are included in other comprehensive income (loss), which is a separate component of stockholders' equity.

BASIC AND DILUTED LOSS PER COMMON SHARE

Basic loss 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 using the treasury stock method, and the assumed conversion of convertible notes. Common equivalent shares have not been included in the net loss per share calculations as the effect would be anti-dilutive.

Potential common equivalent shares of the following at December 31 (shares in thousands):

	2000	1999	1998
Stock options outstanding	12,195	13,488	11,674
Weighted average exercise price	$24.35	$11.75	$11.31
Convertible notes	3,739	--	--
Weighted average exercise price	$92.26	--	--

SEGMENT INFORMATION

The Company is in one business segment under the management approach, the business of discovery, development and marketing of small molecule drugs that address major medical needs.

B. ACCOUNTING POLICIES (CONTINUED)
RECLASSIFICATION IN THE PREPARATION OF FINANCIAL STATEMENTS

All references to share and per-share data for all periods presented have been have adjusted to reflect the two-for-one stock split, effected in the form of a 100% stock dividend, distributed on August 23, 2000 to shareholders of record as of August 9, 2000.

Certain amounts in prior years' financial statements have been reclassified to conform to the current presentation. These reclassifications had no effect on the reported net loss.

NEW ACCOUNTING PRONOUNCEMENTS

In June 2000, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standard ("SFAS") No. 138, "Accounting for Certain Derivative Instruments an amendment of SFAS No. 133" ("Accounting for Certain Derivative Instruments and Hedging Activities"). This statement establishes accounting and reporting standards for derivative instruments embedded in other contracts (collectively referred to as "derivatives") and for hedging activities. The statement requires companies to recognize all derivatives as either assets or liabilities, with the instruments measured at fair value. The accounting for changes in fair value, gains or losses, depends on the intended use of the derivative and its resulting designation. The Company will adopt SFAS 138 in 2001, in accordance with SFAS 137, which deferred the effective date of SFAS 133. To date, the Company has not engaged in derivative or hedging activities and accordingly does not believe the adoption of SFAS 138 will have a material impact on its financial statements and related disclosures.

C. CHANGE IN ACCOUNTING PRINCIPLE

In the fourth quarter of 2000, Vertex adopted SAB 101, "Revenue Recognition in Financial Statements" retroactive to January 1, 2000. SAB 101 was issued by the Securities and Exchange Commission ("SEC") in December 1999 and provides guidance related to revenue recognition policies based on interpretations and practices followed by the SEC. Prior to adoption of SAB 101, Vertex recognized revenue from collaborative research and development arrangements as earned under the terms of the arrangements. License payments were recorded as revenue when payment was assured and contractual obligations met. Payments from contractual milestones

were recognized when achieved, and product research funding was recorded on a quarterly basis, when research effort was incurred. In adopting SAB 101, Vertex recognizes revenue from research and development arrangements over the period of continuing involvement as the lessor of the non-refundable cash received or the result achieved using percentage of completion accounting. Where Vertex has no continuing involvement, nonrefundable license fees will be recorded as revenue upon receipt and milestone's will be recorded as revenue upon achievement of the milestone by the collaborative partner. Pursuant to the adoption of SAB 101, the Company recorded the cumulative effect of a change in accounting principle related to collaborative research and development revenues recognized in prior periods. As a result, the Company recorded a one-time, non-cash charge of $3,161,000. The impact of the adoption of SAB 101 was to defer revenue recognition for certain portions of revenue previously recognized under our collaborative agreements into future accounting periods. During the year ended December 31, 2000, the full amount of the $3,161,000, the cumulative effect of the change in accounting principle was recognized as revenue. The results of the first three quarters of the fiscal year ending December 31, 2000 have been restated in accordance with SAB 101. Previously reported financial data for the years ended December 31, 1999 and 1998 has not been restated to give the pro forma effect of the adoption of the provisions of SAB 101 as the effect could not be reasonably determined.

D. INVESTMENTS

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

	2000		1999	
	AMORTIZED COST	FAIR VALUE	AMORTIZED COST	FAIR VALUE
Cash and cash equivalents				
Cash and money market funds	$301,028	$301,028	$ 27,339	$ 27,339
Corporate debt securities	21,062	21,062	4,209	4,209
Total cash and cash equivalents	$322,090	$322,090	$ 31,548	$ 31,548
Investments				
US government securities				
Due within 1 year	$ 24,736	$ 24,769	$ 12,318	$ 12,292
Due within 1 to 5 years	40,363	40,788	18,054	17,702
Due over 5 years	2,003	1,975	--	--
Corporate debt securities				
Due within 1 year	41,739	41,740	71,807	71,788
Due within 1 to 5 years	265,256	268,847	31,647	31,304
Due over 5 years	7,092	7,215	23,450	23,168
Total Investments	$381,189	$385,334	$157,276	$156,254

Gross unrealized gains and losses for government securities were $477,000 and $38,000 at December 31, 2000, respectively. Gross unrealized gains and losses for corporate debt securities were $3,877,000 and $171,000 at December 31, 2000, respectively. Gross unrealized gains and losses for government securities were $0 and $364,000 at December 31, 1999, respectively. Gross unrealized gains and losses for corporate debt securities were $112,000 and $770,000 at December 31, 1999, respectively. Gross realized gains and losses for 2000 were $69,000 and $339,000, respectively. Gross realized gains and losses for 1999 were $106,000 and $761,000, respectively. Gross realized gains and losses for 1998 were $852,000 and $305,000, respectively. Maturities stated are effective maturities.

E. RESTRICTED CASH

In accordance with operating lease agreements, at December 31, 2000 and 1999 the Company held in deposit approximately $9,788,000 with its bank to collateralize conditional, stand-by letters of credit in the name of the landlord. In 1999, the Company entered into new operating leases for additional space and facilities. In connection with these leases the Company was required to provide security deposits in the form of stand-by letters of credit. The letters of credit are redeemable only if the Company defaults on the leases 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

F. PROPERTY AND EQUIPMENT

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

	2000	1999
Leasehold improvements	$19,915	$15,851
Furniture and equipment	21,390	15,215
Computers	3,861	3,190
Software	5,066	4,053
Equipment under capital lease	20,512	20,522
	70,744	58,831
Less accumulated depreciation and amortization	42,595	34,351
	$28,149	$24,480

Depreciation expense for the years ended December 31, 2000, 1999 and 1998 was $8,244,000, $6,206,000 and $4,520,000, respectively. The accumulated depreciation and amortization of equipment under capital leases was $19,759,000 and $18,504,000 at December 31, 2000 and 1999, respectively. Assets under capital leases collateralize the related lease obligations.

G. INVESTMENT IN AFFILIATE

In February 1999, Vertex restructured its investment in Altus, which was a majority owned subsidiary, so that Altus operates independently from Vertex. As part of the transaction, Vertex provided Altus $3,000,000 of cash and surrendered its shares in Altus preferred stock in exchange for two new classes of preferred stock and warrants. Vertex had a 23.5% and 29.5% equity investment in Altus of approximately $1,726,000 and $2,276,000 at December 31, 2000 and December 31, 1999, respectively. For the years ending December 31, 2000 and December 31, 1999, Vertex recorded $550,000 and $724,000, respectively, as its share of Altus' losses.

H. ACCRUED EXPENSES

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

	2000	1999
Development contract costs	$ 6,417	$ 3,331
Payroll and benefits	3,529	1,822
Professional fees	2,242	3,005
Other	2,806	3,015
	$14,994	$11,173

I. OBLIGATIONS UNDER CAPITAL LEASE AND DEBT

At December 31, 2000, long-term capital lease and debt obligations were due as follows (in thousands):

YEAR ENDED DECEMBER 31,	CAPITAL LEASES	DEBT	TOTAL
2001	$1,332	$1,114	$2,446
2002	89	1,351	1,440
2003	--	873	873
Total minimum lease and debt payments	1,421	3,338	4,759
Less amount representing interest payments	69	--	69
Present value of minimum lease and debt payments	1,352	3,338	4,690
Less current portion	1,264	1,113	2,377
	$ 88	$2,225	$2,313

During 1998, the Company financed under a master debt agreement assets with a cost of $1,574,000, $1,506,000 and $1,005,000 with interest rates of 7.89%,
8.06% and 8.08%, respectively. During 1997, the Company financed under a master debt agreement assets with a cost of $676,000 and $1,137,000 with the interest rates of 8.59% and 8.38%, respectively. The Company has certain equipment with a net book value of $2,586,000 designated as collateral under these agreements at December 31, 2000. These agreements have a term of five years, and require that the Company maintain a certain level of cash and investments. The carrying value of these debt obligations approximates fair value.

In December 1999, the Company obtained a line of credit allowing for borrowings in aggregate of up to $20,000,000 for equipment and leasehold improvement expenditures. As of December 31, 2000 and 1999, no amounts were outstanding, and $20,000,000 was available under the line of credit.

J. CONVERTIBLE SUBORDINATED NOTES

On March 14, 2000, the Company issued $175,000,000 of 5% Convertible Subordinated Notes due March 2007 ("March Notes"). The notes were convertible, at the option of the holder, into common stock at a price equal to $40.32 per share, subject to adjustment under certain circumstances. The deferred cost associated with issuance of the March Notes were $5,340,000, of which $423,000 was amortized to expense in 2000.

On September 15, 2000, the Company announced the call of its March Notes. By October 4, 2000, $175,000,000 of the March Notes were converted by holders into 4,340,260 shares of common stock at a price of $40.32 per share. The Company reclassified $4,917,000 of related unamortized deferred debt issuance costs to stockholders' equity as part of the conversion. In connection with the call for redemption, the holders of the March Notes were entitled to a "make-whole" payment of $82.14 per $1,000 principal amount of notes, which resulted in a one-time charge to earnings of $14,375,000 in the third quarter of 2000. The "make-whole" payment was paid in cash in the fourth quarter of 2000.

On September 19, 2000, the Company issued $345,000,000 of 5% Convertible Subordinated Notes due September 2007 ("September Notes"). The September Notes are convertible, at the option of the holder, into common stock at a price equal to $92.26 per share, subject to adjustment under certain circumstances. The September Notes bear an interest rate of 5% per annum, and the Company is required to make semi-annual interest payments on the outstanding principal balance of the notes on

J. CONVERTIBLE SUBORDINATED NOTES (CONTINUED)

March 19 and September 19 of each year. The September Notes are redeemable by the Company at any time on or after September 19, 2003 at specific redemption prices if the closing price of the Company's common stock exceeds 120% of the conversion price then in effect for at least 20 trading days within a period of 30 consecutive trading days. Before September 19, 2003 the Company may redeem the notes at a redemption price equal to the principal amount of notes, plus accrued and unpaid interest, if any, and a specified additional payment amount, if the closing price of the Company's common stock exceeds 150% of the conversion price then in effect for at least 20 trading days within a period of 30 consecutive trading days. The deferred costs associated with the sale of the convertible notes were $10,698,000 of which $428,000 was amortized to expense in 2000. The fair value of the notes at December 31, 2000 is $336,651,000, as obtained from a quoted market source.

K. COMMITMENTS

The Company leases its facilities and certain equipment under non-cancelable operating leases. The Company's leases have terms through the year 2017. The Company did not enter into any new operating leases during the year 2000.

At December 31, 2000 (adjusted for the lease commitments in connection with the January 2001 lease agreement described below), future minimum commitments under operating leases with non-cancelable terms of more than one year are as follows (in thousands):

YEAR	OPERATING LEASES
2001	$ 13,068
2002	26,747
2003	29,192
2004	28,705
2005	28,705
Thereafter	265,817
Total minimum lease payments	$392,234

Rental expense was $6,722,000, $6,235,000 and $4,358,000 for the years ended December 31, 2000, 1999 and 1998, respectively.

In January 2001, the Company entered into an agreement to lease approximately 275,000 square feet of laboratory and office space presently under construction. The lease will expire in 2017 with the option to extend the lease for two consecutive terms of 10 years each ultimately expiring in 2037. The Company's future minimum commitments under this lease are included in the table above.

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 2001, 2002, 2003 and 2004 the amounts committed under these contracts are $4,295,000, $3,704,000, $856,000 and $85,000, respectively.

L. SEGMENT REPORTING

The following table presents long-lived assets by geographic area as of December 31, 2000 and 1999 (in thousands):

	LONG-LIVED ASSETS	
	2000	1999
United States	$21,292	$18,289
United Kingdom	6,857	6,191
Consolidated	$28,149	$24,480

M. INCOME TAXES

The Company's federal statutory income tax rate for 2000, 1999 and 1998 was 34%. The Company recorded no income tax benefit for 2000, 1999 and 1998 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):

	2000	1999
Net operating loss	116,515	$ 66,001
Tax credits carryforward	23,938	13,464
Property, plant and equipment	585	676
Other	29,508	411
Gross deferred tax asset	170,546	80,552
Valuation allowance	(170,546)	(80,552)
Net deferred tax balance	$ --	$ --

Of the $170,546,000 valuation allowance at December 31, 2000, $71,603,000 relates to deductions for nonqualified stock options which will be credited to additional paid-in capital, if realized.

For federal income tax purposes, as of December 31, 2000, the Company has net operating loss carryforwards of approximately $295,997,000 and $16,026,000 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 1999 deferred tax asset has been adjusted in connection with the restructuring of the Company's investment in Altus. A valuation allowance has been established for the full amount of the deferred tax asset since it is more likely than not that the deferred tax asset will not be realized.

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 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 2000, which may also limit the amount of net operating loss and tax credit utilization in a subsequent year.

N. COMMON AND PREFERRED STOCK

COMMON STOCK

At December 31, 2000, 13,033,240 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; 10,098 shares were reserved for exercise of certain other options granted in 1991; approximately 85,000 shares of common stock were reserved for issuance under the Company's 401(k) Plan, and approximately 369,000 shares of common stock were reserved for issuance under the Company's Employee Stock Purchase Plan. Additionally, at December 31, 2000 there were approximately 3,739,000 shares reserved for the conversion of the Company's September Notes.

In August 2000, the Company effected a two-for-one stock split of all common stock in the form of a stock dividend. All common stock share and per share amounts in these consolidated financial statements have been restated to reflect this stock split.

STOCK OPTION PLANS

The Company has a 1991 Stock Option Plan (the "1991 Plan"), a 1994 Stock and Option Plan (the "1994 Plan") and a 1996 Stock and Option Plan (the "1996 Plan"). Stock options may be granted under the Plans either as options intended to qualify as "incentive stock options" ("ISOs") under the Internal Revenue Code or as non-qualified stock options ("NQSOs"). Under the 1991 Plan, stock options may be granted to employees (including officers and directors who are employees) and to consultants of the Company (NQSOs only). Under the 1994 Plan and the 1996 Plan, stock rights, which may be (i) ISOs when Internal Revenue Code requirements are met, (ii) NQSOs, or (iii) 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). Under the 1991 and 1994 Plans ISOs may be granted at a price not less than the fair market value of the common stock on the date of the grant, and NQSOs 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 the grant. Stock options granted under the 1996 Plan may not be granted at a price less than the fair market value of the common stock on the date of grant. Vesting periods for all plans are generally four or five years, and are determined by the Compensation Committee. ISOs granted under the Plans must expire not more than ten years from the date of grant.

The Company has reserved 8,000,000 shares under the 1991 Plan and 1994 Plan. The 1996 Plan reserved an additional 10,500,000 shares, of which 1,500,000 were reserved during 2000. At December 31, 2000, the Company had a total of 848,245 shares of common stock available for future grant under its stock option plans.

The Company issued options to purchase 20,000 shares of common stock in 1998 at exercise prices below the fair market value of the common stock on the date of grant. The Company recorded an increase to additional paid in capital and a corresponding charge to deferred compensation to recognize the aggregate difference between the exercise price and the fair market value of the common stock in the amount of $82,000 for 1998. Deferred compensation is being amortized over the option vesting period. Amortization of deferred compensation expense of $53,000, $53,000 and $32,000 was recognized during 2000, 1999 and 1998, respectively.

Compensation cost recognized in connection with the issuance of stock options to nonemployees was $96,000, $59,000 and $59,000 in 2000, 1999 and 1998, respectively.

N. COMMON AND PREFERRED STOCK (CONTINUED)

Stock option activity for the years ended December 31, 2000, 1999 and 1998 is as follows (shares in thousands):

	2000		1999		1998	
	SHARES	WEIGHTED AVERAGE EXERCISE PRICE	SHARES	WEIGHTED AVERAGE EXERCISE PRICE	SHARES	WEIGHTED AVERAGE EXERCISE PRICE
Outstanding at beginning of year	13,488	$11.75	11,674	$11.31	9,404	$11.01
Granted	2,741	66.50	2,630	13.00	2,682	12.29
Exercised	(3,788)	10.57	(488)	7.62	(156)	7.45
Canceled	(246)	15.18	(328)	13.59	(256)	12.95
Outstanding at end of year	12,195	24.35	13,488	11.75	11,674	11.31
Options exercisable at year-end	5,194	$11.84	6,880	$10.29	5,516	$ 9.38
Weighted average fair value of options granted during the year:		$38.36		$ 6.53		$ 5.84

The fair value of each option granted during 2000, 1999, and 1998 was estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted average assumptions:

	2000	1999	1998
Expected life (years)	5.50	5.50	5.11
Expected volatility	58.00%	45.00%	46.50%
Risk free interest rate	5.63%	6.20%	4.86%
Dividend yield	--	--	--

The following table summarizes information about stock options outstanding and exercisable at December 31, 2000 (shares in thousands):

	OPTIONS OUTSTANDING			OPTIONS EXERCISABLE	
RANGE OF EXERCISE PRICES	NUMBER OUTSTANDING	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE	WEIGHTED AVERAGE EXERCISE PRICE	NUMBER EXERCISABLE	WEIGHTED AVERAGE EXERCISE PRICE
$3.88-$9.50	2,252	3.76	$ 7.69	2,210	$ 7.67
9.94-12.22	1,058	7.72	10.46	413	10.44
12.25-13.11	2,060	8.86	13.08	344	13.06
13.17-13.67	2,354	7.37	13.64	1,017	13.64
13.69-19.78	1,752	6.38	15.99	1,102	15.91
20.10-68.71	548	9.31	47.29	97	36.39
70.75-70.75	2,005	9.93	70.75	6	70.75
71.62-93.12	166	9.76	82.88	5	83.03
$3.88-$93.12	12,195	7.38	$24.35	5,194	$11.84

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

N. COMMON AND PREFERRED STOCK (CONTINUED)
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 2000, 1999, and 1998 the following was issued under the plan:

	2000	1999	1998
Number of shares	80,367	103,058	76,340
Average price paid	$ 16.05	$ 9.69	$ 11.33

Had the Company adopted SFAS 123, the weighted average fair value of each purchase right granted during 2000, 1999 and 1998 would have been $6.07, $3.32 and $3.83, 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 58%, 45%, and 52% for 2000, 1999, and 1998, respectively (3) risk-free interest rate of 5.98%, 5.72% and 4.70% for 2000, 1999 and 1998, respectively, and (4) no dividend yield.

PRO FORMA DISCLOSURES

Had compensation expense for the all stock awards been determined consistent with SFAS 123, the Company's net loss and net loss per common share would approximate the pro forma amounts below (in thousands except per share data):

		2000	1999	1998
Net Loss	As reported	$(39,658)	$(40,966)	$(33,086)
	Pro forma	$ 56,983	$(52,997)	$(41,542)
Basic and diluted loss per common share	As reported	$ (0.73)	$ (0.80)	$ (0.65)
	Pro forma	$ (1.05)	$ (1.04)	$ (0.82)

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 half of one-hundredth of a share of Series A junior participating preferred stock, $0.01 par value (the "Junior Preferred Shares"), of the Company at a price of $135 per one half of 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

N. COMMON AND PREFERRED STOCK (CONTINUED)

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 half of 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 $0.01 per Right.

O. COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENTS

TAISHO PHARMACEUTICAL CO., LTD AND SERONO S.A.

In November 1999, the Company and Taisho Pharmaceutical Co., LTD ("Taisho") entered into an agreement to collaborate on the discovery, development and commercialization of caspase inhibitors for the treatment of cerebrovascular, cardiovascular and neurdegenerative diseases. Under the agreement, Taisho agreed to pay the Company up to $43,000,000 in pre-commercial payments, comprised of research funding, milestone payments including $4,500,000 for prior research costs. These amounts are based on the development of two compounds. In addition, Taisho will also pay for certain costs of developing compounds that emerge from the caspase research program. Vertex will also receive royalties on future product sales. Taisho will have an option to obtain marketing rights in Japan and certain Far East markets for any compounds arising from the collaboration.

In December 2000, the Company and Serono S.A. ("Serono") entered into an agreement to collaborate on the discovery, development, and commercialization of caspase inhibitors. Under the agreement, the Company could receive up to $95,000,000 in pre-commercial payments, comprised of $5,000,000 in payments for prior research, up to $20,000,000 in product research funding over five years and up to $70,000,000 in further license fees and milestone payments. These amounts are based on the development of more than one drug candidate. The two companies will share equally in development costs. The Company and Serono will establish a joint venture for the commercialization of products in North America, where they will share marketing rights and profits from the sale of caspase inhibitors. Serono will have exclusive rights to market caspase inhibitors in other territories, excluding Japan and certain other countries in the Far East, and will pay Vertex for the supply of drug substance. Serono has the right to terminate the agreement without cause upon 90 days written notice, effective either at September 30, 2002 or September 30, 2004.

For the years ended December 31, 2000 and 1999, the Company recognized approximately $6,974,000 and $3,900,000 as revenue, respectively, under the caspase program. At December 31, 2000, there was approximately $2,026,000 in deferred revenue under the caspase program, which the Company expects to record as revenue in 2001.

NOVARTIS PHARMA AG

In May 2000, the Company and Novartis Pharma AG ("Novartis") entered into an agreement to collaborate on the discovery, development and commercialization of small molecule drugs directed at targets in the kinase protein family. Under the agreement, Novartis agreed to pay the Company approximately $600,000,000 in pre-commercial payments, comprised of $15,000,000 paid upon signing of the agreement, up to $200,000,000 in product research funding over six years and up to approximately $400,000,000 in further license fees, milestone payments and cost reimbursements. These amounts are based on the development of eight drug candidates. In addition, Novartis created a $200,000,000 loan facility to support certain clinical studies, which the Company may draw down in increments up to

O. COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENTS (CONTINUED)

$25,000,000 for each drug candidate. The loan is interest free and Novartis will forgive the full amount of any advances if Novartis accepts the drug candidate for development under the agreement. The Company will have the responsibility for drug discovery and clinical proof-of-concept testing of drug candidates. Novartis will have exclusive worldwide development, manufacturing and marketing rights to clinically and commercially relevant drug candidates that it accepts for development from the Company. Vertex will receive royalties on any products that are marketed as part of the collaboration. Subject to certain conditions, the Company will have co-promotion rights in the United States and Europe, and will retain the rights to any intellectual property resulting from the collaboration. Novartis may terminate this agreement without cause after four years upon one year's written notice. For the year ended December 31, 2000, the Company recognized approximately $27,910,000 in revenue under the kinase program. At December 31, 2000 there was approximately $9,548,000 in deferred revenue under the contract, which the Company expects to record as revenue in 2001.

AVENTIS S.A.

In September 1999, the Company and Aventis S.A. ("Aventis"), formerly Hoechst Marion Roussel Deutschland GmbH ("HMR"), entered into an expanded agreement covering the development of VX-740, an orally active inhibitor of interleukin-1 beta converting

enzyme ("ICE"). Under the agreement, Aventis agreed to pay the Company $20,000,000 for prior research costs, and up to $62,000,000 in milestone payments for successful development by Aventis of VX-740 in rheumatoid arthritis, the first targeted indication, as well as similar milestone payments for each additional indication. Aventis has an exclusive worldwide license to develop, manufacture and market VX-740, as well as an exclusive option for all other compounds discovered as part of the research collaboration between the Company and HMR that ended in 1997 under which the Company received research funding. Aventis will fund the development of VX-740. Vertex may co-promote the product in the U.S. and Europe and will receive royalties on global sales, if any. Aventis may terminate this agreement without cause upon six months' written notice. Collaborative and other research and development revenues earned under the 1999 expanded development agreement were $10,000,000 and $15,000,000, in the years ended December 31, 2000 and 1999, respectively. The Company did not earn any revenue under the previous agreement during 2000. Revenues earned under the previous agreement were $120,000 and $460,000 in the years ended December 31, 1999 and 1998, respectively.

SCHERING AG

In 1998 the Company and Schering AG, Germany ("Schering") entered into an agreement to collaborate on the research, development and commercialization of novel, orally active neurophilin ligand compounds to promote nerve regeneration for the treatment of a number of neurological diseases. Under the terms of the agreement, Schering agreed to pay the Company up to $88,000,000 comprised of $6,000,000 paid upon signing in September 1998, up to $22,000,000 of product research funding over five years and $60,000,000 of development and commercialization milestone payments. Under terms of the agreement, Vertex and Schering will have an equal role in management of neurophilin ligand research and product development. In North America, Vertex will have manufacturing rights, and Vertex and Schering will share equally in the marketing expenses and profits from commercialized compounds. In addition to having manufacturing rights in North America, the Company retains the option to manufacture bulk drug substance for sales and marketing in territories outside Europe, the Middle East and Africa. Schering will have the right to manufacture and market any commercialized compounds in Europe, the Middle East and Africa, and pay Vertex a royalty on product sales, if any. Schering has the right to terminate without cause upon a six months' written

O. COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENTS (CONTINUED) notice. For the years ended December 31, 2000, 1999 and 1998, approximately $6,027,000, $4,000,000 and $10,000,000, was recognized as revenue under the contract program, respectively. The balance in deferred revenue was $1,000,000 for the year ended December 31, 1999.

ELI LILLY & COMPANY

The Company and Eli Lilly and Company ("Lilly") entered into a collaborative agreement to design inhibitors of the hepatitis C protease enzyme for development as novel drugs to treat hepatitis C infection. Under the terms of the agreement, Lilly agreed to pay the Company up to $51,000,000 comprised of a $3,000,000 payment paid in June 1997, $33,000,000 of product research funding over six years and $15,000,000 of development and commercialization milestone payments. The Company has the option to supply 100 percent of Lilly's commercial drug substance supply needs. 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' written notice. Revenue recognized under the HCV Protease program under the Lilly contract were $5,948,000, $5,452,000 and $5,193,000 for the years ended December 31, 2000, 1999 and 1998, respectively.

KISSEI PHARMACEUTICAL CO. LTD.

P38 MAP KINASE. The Company and Kissei Pharmaceutical Co., Ltd. ("Kissei") entered into an agreement to collaborate on the 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 agreed to pay the Company up to $22,000,000 composed of a $4,000,000 license payment, $11,000,000 of product research funding over three years and $7,000,000 of development and commercialization milestone payments. Research funding ended under this program on June 30, 2000 and the Company has received the full amount of research funding specified under the agreement. Kissei has exclusive rights to develop and commercialize these 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. Additionally, Kissei agreed to pay certain development costs. For the years ended December 31, 2000, 1999 and 1998, approximately $5,615,000,

$6,286,000 and $5,521,000 was recognized as revenue under the p38 MAP research and development program, respectively. The balance in deferred revenue was $1,000,000 and $1,000,000 for the years ended December 31, 2000 and 1999, respectively.

HIV PROTEASE INHIBITORS. The Company and Kissei are collaborating in the development and commercialization of amprenavir. Under the collaborative agreement, Kissei agreed 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. The Company received the full amount of research funding specified under the agreement. Under the collaboration, Kissei has exclusive rights to develop and commercialize amprenavir in Japan and will pay Vertex a royalty on sales. Vertex is responsible for the manufacture of bulk product for Kissei. Kissei also has an exclusive option to develop and commercialize the amprenavir prodrug VX 175 in Japan. Revenue earned under the Kissei agreement for the years ended December 31, 2000, 1999 and 1998 were $7,000, $1,000,000 and $217,000, respectively.

O. COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENTS (CONTINUED) GLAXOSMITHKLINE

The Company and GlaxoSmithKline ("Glaxo") entered into a collaborative agreement to develop and commercialize Agenerase (amprenavir) and its prodrug VX-175. Under the collaborative agreement, for research and development of HIV protease inhibitors, Glaxo agreed to pay the Company up to $42,000,000 comprised of a $15,000,000 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 for an initial drug candidate. Glaxo is also obligated to pay additional development and commercialization milestone payments for subsequent drug candidates, including VX-175. Research funding under this agreement ended on December 31, 1998. In addition, Glaxo is required to bear the costs of development in its territory of drug candidates under the collaboration. Glaxo 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. The Company has retained certain bulk drug manufacturing rights and certain co-promotion rights in territories licensed to Glaxo. Glaxo has the right to terminate its arrangement without cause upon twelve months' notice. Termination by Glaxo of 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 by Vertex thereunder. In 1999, the Company began earning a royalty from Glaxo from sales of Agenerase. Revenues and royalties earned from Glaxo were $15,646,000, $13,927,000 and $6,457,000 for the years ended December 31, 2000, 1999 and 1998, respectively.

In June 1996, the Company and Glaxo obtained a worldwide, non-exclusive license under certain G.D. Searle & Co. ("Searle") patent applications in the area of HIV protease inhibition. The Company pays Searle a royalty based on sales of Agenerase.

P. 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 20% of their annual compensation to the plan, subject to statutory limitations. For 2000, the Company declared discretionary matching contributions to the plan in the aggregate amount of $1,148,000 payable in the form of shares of the Company's common stock. Of these shares, 20,880 were issued as of December 31, 2000 with approximately 10,000 issuable in 2001. For 1999, the Company declared discretionary matching contributions to the plan in the aggregate amount of $866,000, payable in the form of shares of the Company's common stock. Of these shares, 47,708 were issued as of December 31, 1999 with approximately 13,400 issued in 2000. For 1998, the Company declared discretionary matching contributions to the plan in the aggregate amount of $672,000, payable in the form of shares of the Company's common stock. Of these shares, 38,838 were issued as of December 31, 1998 with the remaining 14,390 issued in 1999.

Q. RELATED PARTY

A sibling of the Company's Chairman and Chief Executive Officer is a partner in the law firm representing the Company to which $736,000, $480,000 and $333,000 in legal fees were paid in 2000, 1999 and 1998, respectively.

R. LEGAL PROCEEDINGS

Chiron Corporation (Chiron) filed suit on July 30, 1998 against Vertex and Eli Lilly and Company in the United States District Court for the Northern District of California, alleging infringement by the defendants of three U.S. patents issued to Chiron. The infringement action relates to research activities by the defendants in the hepatitis C viral protease field and the alleged use of inventions claimed by Chiron in connection with that research. Chiron has requested damages in an unspecified amount, as well as an order permanently enjoining the defendants from unlicensed use of the claimed Chiron inventions. During 1999, Chiron requested and was granted a reexamination by the U.S. Patent and Trademark Office of all three of the patents involved in the suit. Chiron also requested and, over the opposition of Vertex and Lilly, was granted a stay in the infringement lawsuit, pending the outcome of the patent reexamination. That reexamination process is still ongoing. While the length of the stay, the outcome of the reexamination, the effect of that outcome on the lawsuit and the final outcome of the lawsuit cannot be determined, Vertex maintains that the plaintiff's claims are without merit and intends to defend the lawsuit, if and when it resumes, vigorously.

S. QUARTERLY FINANCIAL DATA (UNAUDITED)

(IN THOUSANDS, EXCEPT PER SHARE DATA)

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
2000*				
Total revenues	$ 8,132	$ 27,023	$ 17,288	$25,684
Total expenses	26,053	27,386	28,797	34,573
Other income, net	2,371	2,965	4,448	6,776
Debt Conversion Expense	--	--	14,375	--
Cumulative effect of change in accounting principle	3,161	--	--	--
Net loss	(18,711)	2,602	(21,436)	(2,113)
Basic net income/(loss) per share	$ (0.36)	$ 0.05	$ (0.40)	$ (0.04)
Diluted net income/(loss) per share	$ (0.36)	$ 0.04	$ (0.40)	$ (0.04)
1999				
Total revenues	$ 3,963	$ 12,516	$ 7,225	$26,856
Total expenses	24,499	25,997	23,692	27,772
Other income, net	2,982	2,640	2,181	2,631
Net loss	(17,554)	(10,841)	(14,286)	1,715
Basic net income/(loss) per share	$ (0.34)	$ (0.21)	$ (0.28)	$ 0.04
Diluted net income/(loss) per share	$ (0.34)	$ (0.21)	$ (0.28)	$ 0.03

* The 2000 quarterly financial data, as reported in the Company's previously filed Quarterly Reports on Form 10-Q, has been adjusted to reflect the adoption of SAB 101 in the fourth quarter of 2000, retroactive to January 1, 2000, as discussed in Note C. Periods beginning before January 1, 2000 have not been adjusted as the effect of the change in accounting principle could not be reasonably determined.

EXHIBITS

EXHIBIT NUMBER	EXHIBIT DESCRIPTION
3.4	By-laws of Vertex as amended and restated as of March 12, 2001.
10.3	1996 Stock and Option Plan, Amended and Restated as of March 12, 2001.
10.9	Executive Employment Agreement between Vertex and Iain P.M. Buchanan.
10.10	Agreement dated December 21, 2000 between Vertex and Richard H. Aldrich.
10.14	Third, Fourth and Fifth Amendments to Lease between Fort Washington Realty Trust and Vertex (with certain confidential information deleted).
10.16	Lease by and between Kendall Square, LLC, Landlord, and Vertex, executed January 18, 2001 (with certain confidential information deleted).
10.26	Research Agreement between Vertex and Laboratoires Serono S.A. dated December 11, 2000 (with certain confidential information deleted).
23	Consent of Independent Accountants.

EXHIBIT 3.4

BY-LAWS
of
VERTEX PHARMACEUTICALS INCORPORATED
Amended and Restated as of March 12, 2001

ARTICLE I

STOCKHOLDERS

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

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

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

hour, and purposes of the meeting.

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

Section 5. Notice of Meeting. A written notice of each meeting of stockholders, stating the place, date, hour and purposes of the meeting, shall be given at least seven days before the meeting to each stockholder entitled to vote thereat and to each stockholder who, by law, by the Articles of Organization, or by these By-Laws, is entitled

to notice, by leaving such notice with him or at his residence or usual place of business, or by mailing it, postage prepaid, addressed to such stockholder at his address as it appears in the records of the Corporation. Such notice shall be given by the Clerk or an Assistant Clerk or by an officer designated by the Board of Directors. Whenever notice of a meeting is required to be given to a stockholder under any provision of the Business Corporation Law of the Commonwealth of Massachusetts or of the Articles of Organization of these By-Laws, a written waiver thereof, executed before or after the meeting by such stockholder or his attorney thereunto authorized and filed with the records of the meeting, shall be deemed equivalent to such notice.

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

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

Section 8. Action by Vote. When a quorum is present at any meeting, a plurality of the votes properly cast for election to any office shall elect to such office, and a majority of the votes properly cast upon any question other than an election to an office shall decide the question, except when a larger vote is required by law, by the Articles of Organization, or by these By-Laws.

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

Section 10. Proxies. To the extent permitted by law, stockholders entitled to vote may vote either in person or by written proxy. No proxy dated more than six months before the meeting named therein shall be valid. All proxies shall be filed with the clerk of the meeting before being voted. Unless otherwise specified or limited by their terms, such proxies shall entitle the holders thereof to vote at any adjournment of such meeting but shall not be valid after the final adjournment of such meeting.

Section 11. Action by Consent. Any action required or permitted to be taken at any meeting of the stockholders may be taken without a meeting, but only if all stockholders entitled to vote on the matter consent to the action in writing and the written

consents are filed with the records of meetings of stockholders. Such consents shall be treated for all purposes as a vote taken at a meeting.

ARTICLE II

BOARD OF DIRECTORS

Section 1. Number, Elections and Terms. Subject to the rights of the holders of Preferred Stock to elect one or more additional directors under specified circumstances as provided in Article 4 of the Articles of Organization, the Board of Directors shall consist of not less than three nor more that nine persons, the exact number to be fixed from time to time by the Board of Directors pursuant to a resolution adopted by a majority vote of the directors then in office. The Board of Directions shall be classified with respect to the time for which they shall severally hold office by dividing them into three classes, as nearly equal in number as possible, with the term of office of one class expiring at the annual meeting of stockholders each year. At each annual meeting of the stockholders of the Corporation, the successors to the class of directors whose terms expire at that meeting shall be elected to hold office for terms

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

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

nominations are to be made by the stockholder; (iv) such other information regarding each nominee proposed by such stockholder as would be required to be included in a proxy statement filed pursuant to the proxy rules of the Securities and Exchange Commission; and (v) the consent of each nominee to serve as a director of the Corporation if so elected. The presiding officer of the meeting may refuse to acknowledge the nomination of any person not made in compliance with the foregoing procedure.

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

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

Section 5. Directors Elected by Holders of Preferred Stock. Whenever the holders of any class or series or Preferred Stock or of any other class or series of shares issued by the Corporation shall have the right, voting separately as a class or series, to elect one or more directors under specified circumstances, the election, term of office, filling of vacancies, and other features of such directorships shall be governed by the terms of the Articles of Organization applicable thereto, and none of the provisions of Sections 1 to 4 of this Article II shall apply with respect to directors so elected.

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

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

Section 8. Executive Committee. The Board of Directors may, by vote of a majority of the directors then in office, elect from their number an Executive Committee, which shall consist of the Chief Executive Officer and such number of other directors as

the Board shall determine. The Executive Committee shall have and may exercise, when the Board of Directors is not in session, the authority of the Board of Directors in the management of the business of the Corporation, except that it shall not have authority to:

(a) Change the principal office of the Corporation;

(b) Amend the By-Laws;

(c) Issue stock;

(d) Establish and designate series of stock or fix and determine the relative rights and preferences of any series of stock;

(e) Elect officers required by law or these By-Laws to be elected by the stockholders or directors or fill vacancies in any such offices;

(f) Change the number of the Board of Directors or fill vacancies in the Board of Directors;

(g) Remove officers or directors from office;

(h) Authorize the payment of any dividend or distribution to stockholders;

(i) Authorize the reacquisition for value of stock of the Corporation; or

(j) Authorize a merger which by law may be authorized by the Board of Directors.

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

Section 10. Regular Meetings. A regular meeting of the Board of Directors shall be held without call or notice immediately after and at the same place as the annual meeting of the stockholders. Other regular meetings of the Board of Directors may be held without call or notice at such places and at such times as the Board of Directors may,

from time to time, determine, provided that notice of the first regular meeting following any such determination shall be given to absent directors.

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

Section 12. Notice of the Meetings. It shall be sufficient notice to a director of a meeting of the Board of Directors to send notice by mail at least forty-eight (48) hours or by telegram at least twenty-four (24) hours before the meeting, addressed to such directors at his usual or last known business or residence address, or to give notice to such director in person or by telephone at least twenty-four (24) hours before the meeting. Notice of a meeting need not be given to any director if a written waiver of notice, executed by him before or after the meeting, is filed with the records of the meeting, or to any director who attends the meeting without protesting prior thereto or at its commencement the lack of a notice to him. Neither notice of a meeting nor a waiver of a notice need specify the purposes of the meeting.

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

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

Section 15. Action by Written Consent. Unless the Articles of Organization otherwise provide, any action required or permitted to be taken at any meeting of the Board o Directors or of any committee thereof may be taken without a meeting if all the directors or members of the committee as the case may be, consent to the action in writing and the written consents are filed with the records of the meetings of the Board of Directors or such committee. Such consents shall be treated for all purposes as a vote taken at a meeting.

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

Section 17. Compensation of Directors. The Board of Directors may provide for the payment to any of the directors, other than officers or employees of the Corporation, of a specified amount for services as a director or member of a committee of the Board,

or of a specified amount for attendance at each regular or special Board or committee meeting or of both, and all directors shall be reimbursed for expenses of attendance at any such meeting; provided, however, that nothing herein contained shall be construed to preclude any director from serving the Corporation in any other capacity and receiving compensation therefor.

ARTICLE III

OFFICERS AND AGENTS

Section 1. Enumeration; Qualification. The officers of the Corporation shall be a President, a Treasurer, a Clerk, and such other officers, including, without limitation, a Chairman of the Board, one or more Vice Presidents, Assistant Treasurers, and Assistant Clerks as the Board of Directors from time to time may in their discretion elect or appoint. In addition, the Corporation shall have such other agents as may be appointed by management in accordance with these By-Laws. The Chairman of the Board shall be a director. The President need not be a director. The Clerk shall be a resident of Massachusetts unless the Corporation has a resident agent appointed for the purpose of service of process. Any two or more offices may be held by the same person. Any officer may be required by the Board of Directors to give bond for the faithful performance of his duties to the Corporation in such amount and with such sureties as the directors may determine.

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

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

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

Section 5 Chief Executive Officer. The Chief Executive Officer of the Corporation shall be the Chairman of the Board, the President, or such other officer as may from time to time be designated by the Board of Directors. If no such designation is made, the President shall be the Chief Executive Officer. The Chief Executive Officer shall, subject to the control of the Board of Directors, have general charge and

supervision of the business of the Corporation and, except as the Board of Directors shall otherwise determine, shall preside at all meetings of the stockholders and of the Executive Committee. Unless otherwise determined by the Board of Directors, the Chief Executive Officer shall have the authority to appoint such agents, in addition to those officers enumerated in Section 2 of this Article III as being elected or appointed by the Board of Directors, as he shall deem appropriate and to define their respective duties and powers.

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

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

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

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

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

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

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

ARTICLE IV

CAPITAL STOCK

Section 1. Stock Certificates. Each stockholder shall be entitled to a certificate stating the number and the class and the designation of the series, if any, of the shares held by him, in such form as shall, in conformity to law, be prescribed from time to time by the Board of Directors. Such certificate shall be signed by the President or a Vice President and by the Treasurer or an Assistant Treasurer. Such signatures may be facsimile if the certificate is signed by a transfer agent, or by a registrar, other than a director, officer, or employee of the Corporation. In case any officer who has signed or whose facsimile signature has been placed on such certificate shall have ceased to be such officer before such certificate is issued, it may be issued by the Corporation with the same effect as if he were such officer at the time of its issue.

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

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

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

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

any transfer, pledge, or other disposition of such stock, until the shares have been transferred on the books of the stock, until the shares

have been transferred on the books of the Corporation in accordance with the requirements of these By-Laws.

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

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

ARTICLE V

INDEMNIFICATION

Section 1. Directors and Officers. The Corporation shall, to the full extent permitted by law, indemnify each of its directors and officers (including persons who serve at its request as directors, officers, or trustees of another organization in which it has any interest, direct or indirect, as a shareholder, creditor, or otherwise or who serve at its request in any capacity with respect to any employee benefit plan) against all liabilities and expenses, including amounts paid in satisfaction of judgements, in compromise, or as fines and penalties, and counsel fees, reasonably incurred by him in connection with the defense or disposition of any action, suit, or other proceeding, whether civil or criminal, in which he may be involved or with which he may be threatened, while in office or thereafter, by reason of his being or having been such a director, officer, or trustee except with respect to any matter as to which he shall have been adjudicated in any proceeding not to have acted in good faith in the reasonable belief that this action was in the best interests of the Corporation or, to the extent that such matter relates to service with respect to an employee benefit plan, in the best interests of the participants or beneficiaries of such employee benefit plan; provided, however, that as to any matter disposed of by a compromise payment by such director or officer, pursuant to a consent decree or otherwise, no indemnification either for said payment or for any other expenses shall be provided unless such compromise shall be approved as in the best interests of the

Corporation, after notice that it involves such indemnification: (a) by a disinterested majority of the directors then in office; or (b) by a majority of the disinterested directors then in office, provided that there has been obtained an opinion in writing of independent legal counsel to the effect that such director or officer appears to have acted in good faith in the reasonable belief that his action was in the best interests of the Corporation; or (c) by the holders of a majority of the outstanding stock at the time entitled to vote for directors, voting as a single class, exclusive of any stock owned by any interested director or officer.

Expenses, including counsel fees, reasonably incurred by any director or officer in connection with the defense or disposition of any such action, suit, or other proceeding may be paid from time to time by the Corporation, at the discretion of a majority of the disinterested directors then in office, in advance of the final disposition thereof upon receipt of an undertaking by such director or officer to repay the amounts so paid to the Corporation if it is ultimately determined that indemnification for such expenses is not authorized under this Article V, which undertaking may be accepted without reference to the financial ability of such director or officer to make repayment.

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

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

pursuant to this Article V or otherwise and whether or not the Corporation would have the power to indemnify him against such liability.

ARTICLE VI

MISCELLANEOUS

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

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

Section 3. Authorization of Loans and Indebtedness. No loan shall be contracted on behalf of the Corporation, and no bond, note, debenture, guarantee, or other obligation or evidence of indebtedness of the Corporation issued with respect thereto shall be made, executed, and delivered, unless authorized by the Board of Directors, which authorization may be general or confined to specific instances.

Section 4. Execution of Documents. Except as the Board of Directors may generally or in specific instances authorize the execution thereof in some other manner, all deeds, leases, transfers, contracts, checks, drafts, and other orders for the payment of money out of the funds of the Corporation, and (if the issuance thereof shall have been authorized pursuant to Section 3 of this Article VI) all bonds, notes, debentures, guarantees, and other obligations or evidences or indebtedness of the Corporation shall be executed by the Chairman of the Board, the President, any Vice President, or the Treasurer.

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

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

ARTICLE VII

AMENDMENTS

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

time of giving notice of the meeting of stockholders next following the making, amending, or repealing by the Board of Directors of any By-Law, notice thereof stating the substance of such change shall be given to all stockholders entitled to vote on amending the By-Laws. Any By-Law made, amended, or repealed by the Board of Directors may be altered, amended, repealed, or reinstated by the stockholders.

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

Exhibit 10.4

VERTEX PHARMACEUTICALS INCORPORATED

1996 STOCK and OPTION PLAN

(as amended on March 12, 2001, and restated)

1. DEFINITIONS

Unless otherwise specified or unless the context otherwise requires, the following terms, as used in this Vertex Pharmaceuticals Incorporated 1996 Stock and Option Plan, have the following meanings:

Affiliate means a corporation which, for purposes of Section 424 of the Code, is a parent or subsidiary of the Company, direct or indirect.

Board of Directors means the Board of Directors of the Company.

Code means the United States Internal Revenue Code of 1986, as amended.

Committee means the Compensation Committee of the Board of Directors or any successor thereto appointed by the Board of Directors pursuant to Section 4 hereof to administer this Plan.

Common Stock means shares of the Company's common stock, $.01 par value.

Company means Vertex Pharmaceuticals Incorporated, a Massachusetts corporation.

Disability or Disabled means permanent and total disability as defined in Section 22(e)(3) of the Code.

Exchange Act means the Securities Exchange Act of 1934, as amended.

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

ISO means an option intended to qualify as an incentive stock option under Code Section 422(b).

Key Employee means an employee of the Company or of an Affiliate (including, without limitation, an employee who is also serving as an officer or director of the Company or of an Affiliate), designated by the Committee to be eligible to be granted one or more Stock Rights under the Plan.

NQSO means an option which is not intended to qualify as an ISO.

Non-Employee Director means a member of the Board of Directors who is not an employee of the Company or any Affiliate.

Option means an ISO or NQSO granted under the Plan.

Participant means a Key Employee, Non-Employee Director, consultant or advisor of the Company to whom one or more Stock Rights are granted under the Plan. As used herein, "Participant" shall include "Participant's Survivors" and a Participant' s permitted transferees where the context requires.

Participant's Survivors means a deceased Participant's legal representatives and/or any person or persons who acquires the Participant's

rights to a Stock Right by will or by the laws of descent or distribution.

Plan means this Vertex Pharmaceuticals Incorporated 1996 Stock and Option Plan, as amended from time to time.

Shares means shares of the Common Stock as to which Stock Rights have been or may be granted under the Plan or any shares of capital stock into which the Shares are changed or for which they are exchanged within the provisions of Section 3 of the Plan. The Shares issued upon exercise of Stock Rights granted under the Plan may be authorized and unissued shares or shares held by the Company in its treasury, or both.

Stock Agreement means an agreement between the Company and a Participant executed and delivered pursuant to the Plan, in such form as the Committee shall approve.

Stock Award means an award of Shares or the opportunity to make a direct purchase of Shares of the Company granted under the Plan.

Stock Right means a right to Shares of the Company granted pursuant to the Plan as an ISO, an NQSO or a Stock Award.

2. PURPOSES OF THE PLAN

The Plan is intended to encourage ownership of Shares by Key Employees, Non-Employee Directors and certain consultants and advisors to the Company in order to attract such persons, to induce them to work for the benefit of the Company or of an Affiliate and to provide additional incentive for them to promote the success of the Company or of an Affiliate. The Plan provides for the granting of Stock Rights to Key Employees, Non-Employee Directors, consultants and advisors of the Company.

3. SHARES SUBJECT TO THE PLAN

The number of Shares subject to this Plan as to which Stock Rights may be granted from time to time shall be 13,000,000 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.

If an Option granted hereunder or any option granted under the 1991 Stock Option Plan or 1994 Stock and Option Plan ceases to be "outstanding", in whole or in part, or if the Company shall reacquire any Shares issued pursuant to Stock Awards, the Shares which were subject to such Option and any Shares so reacquired by the Company shall also be available for the granting of other Stock Rights under the Plan. Any Stock Right shall be treated as "outstanding"

until such Stock Right is exercised in full, or terminates or expires under the provisions of the Plan, or by agreement of the parties to the pertinent Stock Agreement, without having been exercised in full.

4. ADMINISTRATION OF THE PLAN

The Plan shall be administered by the Committee. Subject to the provisions of the Plan, the Committee is authorized to:

a. Interpret the provisions of the Plan or of any Option, Stock Award or Stock Agreement and to make all rules and determinations which it deems necessary or advisable for the administration of the Plan;

b. Determine which employees of the Company or of an Affiliate shall be designated as Key Employees and which of the Key Employees, Non-Employee Directors, consultants and advisors of the Company and its Affiliates shall be granted Stock Rights;

c. Determine the number of Shares and exercise price for which a Stock Right or Stock Rights shall be granted;

d. Specify the terms and conditions upon which a Stock Right or Stock Rights may be granted; and

e. In its discretion, accelerate the date of exercise of any installment of any Option; provided that the Committee shall not, without the consent of the Option holder accelerate the exercise date of any installment of any Option granted to any Key Employee as an ISO (and not previously converted into an NQSO pursuant to Section 20) if such acceleration would violate the annual vesting limitation contained in Section 422(d) of the Code, as described in Section 6.2.3.

provided, however, that all such interpretations, rules, determinations, terms and conditions shall be made and prescribed in the context of preserving the tax status under Code Section 422 of those Options which are designated as ISOs and shall be in compliance with any applicable provisions of Rule 16b-3 under the Exchange Act. Subject to the foregoing, the interpretation and construction by the Committee of any provisions of the Plan or of any Stock Right granted under it shall be final, unless otherwise determined by the Board of Directors, if the Committee is other than the Board of Directors.

The Committee may employ attorneys, consultants, accountants or other persons, and the Committee, the Company and its officers and directors shall be entitled to rely upon the advice, opinions or valuations of such persons. All actions taken and all interpretations and determinations made by the Committee in good faith shall be final and binding upon the Company, all Participants, and all other interested persons. No member or agent of the Committee shall be personally liable for any action, determination, or interpretation made in good faith with respect to this Plan or grants hereunder. Each member of the Committee shall be indemnified and held harmless by the Company against any cost or expense (including counsel fees) reasonably incurred by him or liability (including any sum paid in settlement of a claim with the approval of the Company) arising out of any act or omission to act in connection with this Plan unless arising out of such member's own fraud or bad faith. Such indemnification shall be in addition to any rights of indemnification the members of the Committee may have as directors or otherwise under the by-laws of the Company, or any agreement, vote of stockholders or disinterested directors, or otherwise.

5. ELIGIBILITY FOR PARTICIPATION

The Committee shall, in its sole discretion, name the Participants in the Plan, provided, however, that each Participant must be a Key Employee, Non-Employee Director, consultant or advisor of the Company or of an Affiliate at the time a Stock Right is granted. Notwithstanding the foregoing, the Committee may authorize the grant of a Stock Right to a person not then an employee, Non-Employee Director, consultant or advisor of the Company or of an Affiliate; provided, however, that the actual grant of such Stock Right shall be conditioned upon such person becoming eligible to become a Participant at or prior to the time of execution of the Stock Agreement evidencing such Stock Right. The granting of any Stock Right to any individual shall neither entitle that individual to, nor disqualify him or her from, participation in other grants of Stock Rights. Nothwithstanding anything to the contrary contained in this Plan, no Stock Rights shall be granted to any director or officer of the Company except in accordance with the applicable rules of the Nasdaq Stock Market or other securities market where the Common Stock is traded.

6. TERMS AND CONDITIONS OF OPTIONS

6.1 General. Each Option shall be set forth in writing in a Stock Agreement, duly executed by the Company and, to the extent required by law or requested by the Company, by the Participant. The Committee may provide that Options be granted subject to such conditions as the Committee may deem appropriate including, without limitation, subsequent approval by the shareholders of the Company of this Plan or any amendments thereto, provided, however, that the option price per share of the Shares covered by each Option shall not be less than the Fair Market Value per share of the Common Stock on the date of grant (or par value if greater). Each Stock Agreement shall state the number of Shares to which it pertains, the date or dates on which it first is exercisable and the date after which it may no longer be exercised. Option rights may accrue or become exercisable in installments over a period of time, or upon the achievement of certain conditions or the attainment of stated goals or events. Exercise of any Option may be conditioned upon the Participant's execution of a Share purchase agreement in form satisfactory to the Committee providing for certain protections for the Company and its other shareholders, including requirements that the Participant's or the Participant's Survivors' right to sell or transfer the Shares may be restricted, and the Participant or the Participant's Survivors may be required to execute letters of investment intent and to acknowledge that the Shares will bear legends noting any applicable restrictions.

6.2 ISOs. ISOs shall be issued only to Key Employees. In addition to the minimum standards set forth in Section 6.1, ISOs shall be subject to the following terms and conditions, with such additional restrictions or changes as the Committee determines are appropriate but not in conflict with Code Section 422 and relevant regulations and rulings of the Internal Revenue Service:

6.2.1 ISO Option Price: The Option price per Share of the Shares subject to an ISO shall not be less than one hundred percent (100%) of the Fair Market Value per share of the Common Stock on the date of grant of the ISO; provided, however that the Option price per share of the Shares subject to an ISO granted to a Participant who owns, directly or by reason of the applicable attribution rules in Code Section 424(d), more than ten percent (10%) of the total combined voting power of all classes of share capital of the Company or an Affiliate, shall not be less than one hundred ten percent (110%) of the said Fair Market Value on the date of grant.

6.2.2 Term of ISO: Each ISO shall expire not more than ten (10) years from the date of grant; provided, however, that an ISO granted to a Participant who owns, directly or by reason of the applicable attribution rules in Code Section 424(d), more than ten percent (10%) of

the total combined voting power of all classes of share capital of the Company or an Affiliate, shall expire not more than five (5) years from the date of grant.

6.2.3 Limitation on Grant of ISOs: No ISOs shall be granted after December 8, 2004, the date which is ten (10) years from the earlier of the date of the adoption of this Plan and the date of the approval of the Plan by the shareholders of the Company.

6.3 Non-Employee Directors' Options. Each Non-Employee Director, upon first being elected or appointed to the Board of Directors, shall be granted an NQSO to purchase 20,000 Shares. Each such Option shall (i) have an exercise price equal to the Fair Market Value (per share) on the date of grant of the Option, (ii) have a term of ten (10) years, and (ii) shall become cumulatively exercisable in sixteen (16) equal quarterly installments, upon completion of each full quarter of service on the Board of Directors after the date of grant. In addition, on June 1 of each year, each Non-Employee Director shall be granted a NQSO to purchase 7,500 shares. Each such Option shall (i) have an exercise price equal to the Fair Market Value (per share) on the date of grant of such Option, (ii) have a term of ten (10) years, and (iii) be exercisable in full immediately on the date of grant. Any director entitled to receive an Option grant under this Section may elect to decline the Option. Notwithstanding the provisions of Section 24 concerning amendment of the Plan, the provisions of this Subsection shall not be amended more than once every six months, other than to comport with changes in the Code, the Employee Retirement Income Security Act, or the rules thereunder. Notwithstanding anything to the contrary contained in any other provisions of this Plan, the Committee shall have no discretion to vary the terms of Options granted under this Section 6.3 from those set forth herein. The provisions of Sections 11, 13 and 14 below shall not apply to Options granted pursuant to this Subsection.

6.4 Limitation on Number of Options Granted. Notwithstanding anything in this Plan to the contrary, no Participant shall be granted Options in any calendar year for the purchase of more than 200,000 Shares (subject to adjustment pursuant to Section 17 to the extent consistent with Section 162(m) of the Code).

7. TERMS AND CONDITIONS OF STOCK AWARDS

Each Stock Award shall be set forth in a Stock Agreement, duly executed by the Company and, to the extent required by law or requested by the Company, by the Participant. The Stock Agreement shall be in the form approved by the Committee, with such changes and modifications to such form as the Committee, in its discretion, shall approve with respect to any particular Participant or Participants. The Stock Agreement shall contain terms and conditions which the Committee determines to be appropriate and in the best interest of the Company; provided, however, that the purchase price per share of the Shares covered by each Stock Award shall not be less than the par value per Share. Each Stock Agreement shall state the number of Shares to which the Stock Award pertains, the date prior to which the Stock Award must be exercised by the Participant, and the terms of any right of the Company to reacquire the Shares subject to the Stock Award, including the time and events upon which such rights shall accrue and the purchase price therefor, and any restrictions on the transferability of such Shares. All Stock Awards shall be subject to restrictions on transfer and a right of repurchase by the Company and shall vest over a period of not less than three years from the date of grant, or upon the later of one year after the date of grant or the achievement of such performance objectives as shall be approved by the Committee when granting the Stock Award. The Committee, in its discretion, may accelerate the vesting of Stock Awards in the event of (a) death or disability of the Participant, or (b) in connection with an Acquisition as defined in Section 17.2.

8. EXERCISE OF STOCK RIGHTS AND ISSUANCE OF SHARES

A Stock Right (or any part or installment thereof) shall be exercised by giving written notice to the Company, together with provision for payment of the full purchase price in accordance with this Section for the Shares as to which such Stock Right is being exercised, and upon compliance with any other condition(s) set forth in the Stock Agreement. Such written notice shall be signed by the person exercising the Stock Right, shall state the number of Shares with respect to which the Stock Right is being exercised and shall contain any representation required by the Plan or the Stock Agreement.

Payment of the purchase price for the Shares as to which such Stock Right is being exercised shall be made (a) in United States dollars in cash or by check acceptable to the Committee, or (b) at the discretion of the Committee,
(i) through delivery of shares of Common Stock (which, in the case of shares acquired from the Company, have been held by the Participant for at least six
(6) months) not subject to any restriction under any plan and having a fair market value equal as of the date of exercise to the cash exercise price of the Stock Right, determined in good faith by the Committee, or (ii) in accordance with a cashless exercise program established with a securities brokerage firm, and approved by the Company, or (iii) by any other means (excluding, however, delivery of a promissory note of the Participant) which the Committee determines to be consistent with the purpose of this Plan and applicable

law, or (iv) by any combination of the foregoing. Notwithstanding the foregoing, the Committee shall accept only such payment on exercise of an ISO as is permitted by Section 422 of the Code.

The Company shall then as soon as is reasonably practicable deliver the Shares as to which such Stock Right was exercised to the Participant (or to the Participant's Survivors, as the case may be). It is expressly understood that the delivery of the Shares may be delayed by the Company in order to comply with any law or regulation which requires the Company to take any action with respect to the Shares prior to their issuance. The Shares shall, upon delivery, be fully paid, non-assessable Shares.

9. RIGHTS AS A SHAREHOLDER

No Participant to whom a Stock Right has been granted shall have rights as a shareholder with respect to any Shares covered by such Stock Right, except after due exercise thereof and tender of the full purchase price for the Shares being purchased pursuant to such exercise and registration of the Shares in the Company's share register in the name of the Participant.

10. ASSIGNABILITY AND TRANSFERABILITY OF STOCK RIGHTS

ISOs and, except as otherwise provided by the Committee, NQSOs and Stock Awards shall not be transferable by the Participant other than by will or by the laws of descent and distribution or pursuant to a qualified domestic relations order as defined by the Code or Title I of the Employee Retirement Income Security Act or the rules thereunder, provided, however, that the designation of a beneficiary of a Stock Right by a Participant shall not be deemed a transfer prohibited by this Section. Except as provided in the preceding sentence or as otherwise permitted under an NQSO or Stock Award Stock Agreement, a Stock Right shall be exercisable, during the Participant's lifetime, only by such Participant (or by his or her legal representative) and shall not be assigned, pledged or hypothecated in any way (whether by operation of law or otherwise) and shall not be subject to execution, attachment or similar process. Any attempted transfer, assignment, pledge, hypothecation or other disposition of any Stock Right or of any rights granted thereunder contrary to the provisions of this Plan, or the levy of any attachment or similar process upon a Stock Right, shall be null and void.

11. EFFECT OF TERMINATION OF SERVICE

11.1 Except as otherwise provided in the pertinent Stock Agreement or as otherwise provided in Sections 12, 13 or 14, if a Participant ceases to be an employee, director, consultant or advisor with the Company and its Affiliates (for any reason other than termination "for cause", Disability, or death) (a "Termination of Service") before the Participant has exercised all Stock Rights, the Participant may exercise any Stock Right granted to him or her to the extent that the Stock Right is exercisable on the date of such Termination of Service, but only within the originally prescribed term of the Stock Right.

11.2 The provisions of this Section, and not the provisions of Section 13 or 14, shall apply to a Participant who subsequently becomes disabled or dies after the Termination of Service; provided, however, that in the case of a Participant's death within three (3) months after the Termination of Service, the Participant's Survivors may exercise the Stock Right within one (1) year after the date of the Participant's death, but in no event after the date of expiration of the term of the Stock Right.

11.3 Notwithstanding anything herein to the contrary, if subsequent to a Participant's Termination of Service, but prior to the exercise of a Stock Right, the Committee determines that, either prior or subsequent to the Participant's Termination of Service, the Participant engaged in conduct which would constitute "cause" (as defined in Section 12), then such Participant shall forthwith cease to have any right to exercise any Stock Right.

11.4 Absence from work with the Company or an Affiliate because of temporary disability or a leave of absence for any purpose, shall not, during the period of any such absence in accordance with Company policies, be deemed, by virtue of such absence alone, a Termination of Service, except as the Committee may otherwise expressly provide.

11.5 A change of employment or other service within or among the Company and its Affiliates shall not be deemed a Termination of Service, so long as the Participant continues to be an employee, director, consultant or advisor of the Company or any Affiliate.

12. EFFECT OF TERMINATION OF SERVICE FOR "CAUSE"

Except as otherwise provided in the pertinent Stock Agreement, in the event of a Termination of Service of a Participant "for cause" all outstanding and unexercised Stock Rights as of the date the Participant is notified his or her service is terminated "for cause" will immediately be forfeited. For purposes of this Section 12, "cause" shall include (and is not limited to) dishonesty with respect to the Company and its Affiliates, insubordination, substantial malfeasance or non-feasance of duty, unauthorized disclosure of confidential

information, conduct substantially prejudicial to the business of the Company or any Affiliate, and termination by the Participant in violation of an agreement by the Participant to remain in the employ of the Company of an Affiliate. The determination of the Committee as to the existence of cause will be conclusive on the Participant and the Company. "Cause" is not limited to events which have occurred prior to a Participant's Termination of Service, nor is it necessary that the Committee's finding of "cause" occur prior to termination. If the Committee determines, subsequent to a Participant's Termination of Service but prior to the exercise of a Stock Right, that either prior or subsequent to the Participant's termination the Participant engaged in conduct which would constitute "cause," then the right to exercise any Stock Right shall be forfeited. Any definition in an agreement between a Participant and the Company or an Affiliate which contains a conflicting definition of "cause" for termination and which is in effect at the time of such termination shall supersede the definition in this Plan with respect to that Participant.

13. EFFECT OF TERMINATION OF SERVICE FOR DISABILITY

Except as otherwise provided in the pertinent Stock Agreement, in the event of a termination of service with the Company and its Affiliates by reason of Disability, the Disabled Participant may exercise any Stock Right granted to him or her to the extent exercisable but not exercised on the date of Disability. A Disabled Participant may exercise such rights only within a period of not more than one (1) year after the date that the Participant became Disabled or, if earlier, within the originally prescribed term of the Stock Right.

The Committee shall make the determination both of whether Disability has occurred and of the date of its occurrence (unless a procedure for such determination is set forth in another agreement between the Company and such Participant, in which case such procedure shall be used for such determination). If requested, the Participant shall be examined by a physician selected or approved by the Committee, the cost of which examination shall be paid for by the Company.

14. EFFECT OF DEATH WHILE AN EMPLOYEE, DIRECTOR OR CONSULTANT

Except as otherwise provided in the pertinent Stock Agreement, in the event of death of a Participant while the Participant is an employee, director, consultant or advisor of the Company or of an Affiliate, any Stock Rights granted to such Participant may be exercised by the Participant's Survivors to the extent exercisable but not exercised on the date of death. Any such Stock Right must be exercised within one (1) year after the date of death of the Participant but in no event after the date of expiration of the term of the Stock Right.

15. PURCHASE FOR INVESTMENT

Unless the offering and sale of the Shares to be issued upon the particular exercise of an Stock Right shall have been effectively registered under the Securities Act of 1933, as now in force or hereafter amended (the "1933 Act"), the Company shall be under no obligation to issue the Shares covered by such exercise unless and until the following conditions have been fulfilled:

a. The person(s) who exercise such Stock Right shall warrant to the Company, at the time of such exercise or receipt, as the case may be, that such person(s) are acquiring such Shares for their own respective accounts, for investment, and not with a view to, or for sale in connection with, the distribution of any such Shares, in which event the person(s) acquiring such Shares shall be bound by the provisions of the following legend which shall be endorsed upon the certificate(s) evidencing their Shares issued pursuant to such exercise or such grant:

"The shares represented by this certificate have been taken for investment and they may not be sold or otherwise transferred by any person, including a pledgee, unless (1) either (a) a Registration Statement with respect to such shares shall be effective under the Securities Act of 1933, as amended, or (b) the Company shall have received an opinion of counsel satisfactory to it that an exemption from registration under such Act is then available, and (2) there shall have been compliance with all applicable state securities laws.

b. The Company shall have received an opinion of its counsel that the Shares may be issued upon such particular exercise in compliance with the 1933 Act without registration thereunder.

The Company may delay issuance of the Shares until completion of any action or obtaining of any consent which the Company deems necessary under any applicable law (including, without limitation, state securities or "blue sky" laws).

16. DISSOLUTION OR LIQUIDATION OF THE COMPANY

Upon the dissolution or liquidation of the Company (other than in connection with a transaction subject to the provisions of Section 17.2), all Stock Rights granted under this Plan which as of such date shall not have been exercised will terminate and become null and

void; provided, however, that if the rights of a Participant have not otherwise terminated and expired, the Participant will have the right immediately prior to such dissolution or liquidation to exercise any Stock Right to the extent that such Stock Right is exercisable as of the date immediately prior to such dissolution or liquidation.

17. ADJUSTMENTS

Upon the occurrence of any of the following events, a Participant's rights with respect to any Stock Right granted to him or her hereunder which have not previously been exercised in full shall be adjusted as hereinafter provided, unless otherwise specifically provided in the written agreement between the Participant and the Company relating to such Stock Right or in any employment agreement between a Participant and the Company or an Affiliate:

17.1 Stock Dividends and Stock Splits. If the shares of Common Stock shall be subdivided or combined into a greater or smaller number of shares or if the Company shall issue any shares of Common Stock as a stock dividend on its outstanding Common Stock, the number of shares of Common Stock deliverable upon the exercise of such Stock Right shall be appropriately increased or decreased, and appropriate adjustments shall be made in the purchase price per share to reflect such subdivision, combination or stock dividend.

17.2 Consolidations or Mergers. In the event of a consolidation or merger in which the Company is not the surviving corporation or which results in the acquisition of substantially all the Company's outstanding stock by a single person or entity or by a group of persons and/or entities acting in concert, or in the event of the sale or transfer of substantially all the Company's assets (any of the foregoing, an "Acquisition"), all then outstanding Options shall terminate unless assumed pursuant to clause (i) below; provided, that either (i) the Committee shall provide for the surviving or acquiring entity or an affiliate thereof to assume the outstanding Options or grant replacement options in lieu thereof, any such replacement to be upon an equitable basis as determined by the Committee, or (ii) if there is no such assumption or substitution, all outstanding Options shall become immediately and fully exercisable immediately prior to the Acquisition, notwithstanding any restrictions or vesting conditions set forth therein.

17.3 Recapitalization or Reorganization. In the event of a recapitalization or reorganization of the Company (other than a transaction described in Section 17.2 above) pursuant to which securities of the Company or of another corporation are issued with respect to the outstanding shares of Common Stock, a Participant upon exercising a Stock Right shall be entitled to receive for the purchase price paid upon such exercise the securities he or she would have received if he or she had exercised such Stock Right prior to such recapitalization or reorganization.

17.4 Modification of ISOs. Notwithstanding the foregoing, any adjustments made pursuant to Section 17.1, 17.2 or 17.3 with respect to ISOs shall be made only after the Committee determines whether such adjustments would constitute a "modification" of such ISOs (as that term is defined in Section 424(h) of the Code) or would cause any adverse tax consequences for the holders of such ISOs. If the Committee determines that such adjustments made with respect to ISOs would constitute a modification of such ISOs, it may refrain from making such

adjustments, unless the holder of an ISO specifically requests in writing that such adjustment be made and such writing indicates that the holder has full knowledge of the consequences of such "modification" on his or her income tax treatment with respect to the ISO.

18. ISSUANCES OF SECURITIES

Except as expressly provided herein, no issuance (including for this purpose the delivery of shares held in treasury) by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of Shares subject to Options. Except as expressly provided herein, no adjustments shall be made for dividends paid in cash or in property (including without limitation, securities) of the Company.

19. FRACTIONAL SHARES

No fractional share shall be issued under the Plan and the person exercising any Stock Right shall receive from the Company cash in lieu of any such fractional share equal to the Fair Market Value thereof determined in good faith by the Board of Directors.

20. CONVERSION OF ISOs INTO NON-QUALIFIED OPTIONS: TERMINATION OF ISOs

Any Options granted under this Plan which do not meet the requirements of the Code for ISOs shall automatically be deemed to be NQSOs without further action on the part of the Committee. The Committee, at the written request of any Participant, may in its discretion take such actions as may be necessary to convert such Participant's ISOs (or any portion thereof) that have not been

exercised on the date of conversion into NQSOs at any time prior to the expiration of such ISOs, regardless of whether the Participant is an employee of the Company or an Affiliate at the time of such conversion. Such actions may include, but not be limited to, extending the exercise period or reducing the exercise price of the appropriate installments of such Options. At the time of such conversion, the Committee (with the consent of the Participant) may impose such conditions on the exercise of the resulting NQSOs as the Committee in its discretion may determine, provided that such conditions shall not be inconsistent with this Plan. Nothing in the Plan shall be deemed to give any Participant the right to have such Participant's ISOs converted into NQSOs, and no such conversion shall occur until and unless the Committee takes appropriate action. The Committee, with the consent of the Participant, may also terminate any portion of any ISO that has not been exercised at the time of such termination.

21. WITHHOLDING

In the event that any federal, state, or local income taxes, employment taxes, Federal Insurance Contributions Act ("FICA") withholdings or other amounts are required by applicable law or governmental regulation to be withheld from the Participant's salary, wages or other remuneration in connection with the exercise of a Stock Right or a Disqualifying Disposition (as defined in Section 22), the Participant shall advance in cash to the Company, or to any Affiliate of the Company which employs or employed the Participant, the amount of such withholdings unless a different withholding arrangement, including the use of shares of the Company's Common Stock, is authorized by the Committee (and permitted by law), provided, however, that with respect to persons subject to Section 16 of the Exchange Act, any such withholding arrangement shall be in compliance with any applicable provisions of Rule 16b-3 promulgated under
Section 16 of the Exchange Act. For purposes hereof, the Fair Market Value of any shares withheld for purposes of payroll withholding shall be determined in the manner provided in Section 1 above, as of the most recent practicable date prior to the date of exercise. If the Fair

Market Value of the shares withheld is less than the amount of payroll withholdings required, the Participant my be required to advance the difference in cash to the Company or the Affiliate employer. The Committee in its discretion may condition the exercise of an Option for less than the then Fair Market Value on the Participant's payment of such additional withholding. In no event shall shares be withheld from any award in satisfaction of tax withholding requirements in an amount that exceeds the minimum tax withholding requirements of law.

22. NOTICE TO COMPANY OF DISQUALIFYING DISPOSITION

Each Key Employee who receives an ISO must agree to notify the Company in writing immediately after the Key Employee makes a "Disqualifying Disposition" of any Shares acquired pursuant to the exercise of an ISO. A Disqualifying Disposition is any disposition (as defined in Section 424(c) of the Code) of such shares before the later of (a) two years from the date the Key Employee was granted the ISO, or (b) one year after the date the Key Employee acquired Shares by exercising the ISO. If the Key Employee has died before such Shares are sold, the notice provisions of this Section 22 shall not apply.

23. EFFECTIVE DATE; TERMINATION OF THE PLAN

The Plan shall be effective on December 12, 1996, the date of its approval by the Board of Directors. The Plan will terminate on December 12, 2006. The Plan may be terminated at an earlier date by vote of the Board of Directors; provided, however, that any such earlier termination will not affect any Stock Rights granted or Stock Agreements executed prior to the effective date of such termination.

24. AMENDMENT OF THE PLAN; AMENDMENT OF STOCK RIGHTS

The Plan may be amended by the stockholders of the Company. The Plan may also be amended by the Board of Directors or the Committee, including, without limitation, to the extent necessary to qualify any or all outstanding Stock Rights granted under the Plan or Stock Rights to be granted under the Plan for favorable federal income tax treatment (including deferral of taxation upon exercise) as may be afforded incentive stock options under Section 422 of the Code, to the extent necessary to ensure that Stock Rights granted or to be granted under the Plan are in accordance with Rule 16b-3 under the Exchange Act, and to the extent necessary to qualify the shares issuable upon exercise of any outstanding Stock Rights granted, or Stock Rights to be granted, under the Plan for listing on any national securities exchange or quotation in any national automated quotation system of securities dealers. No modification or amendment of the Plan shall adversely affect a Participant's rights under a Stock Right previously granted to the Participant without such Participant's consent.

In its discretion, the Committee may amend any term or condition of any outstanding Stock Right, provided, (i) such term or condition as amended is permitted by the Plan, (ii) if the amendment is adverse to the Participant, such amendment shall be made only with the

consent of the Participant, (iii) any such amendment of any ISO shall be made only after the Committee determines whether such amendment would constitute a "modification" of any Stock Right which is an ISO (as that term is defined in Section 424(h) of the Code) or would cause any adverse tax consequences for the holder of such ISO, and (iv) with respect to any Stock Right held by any Participant who is subject to the provisions of
Section 16(a) of the Exchange Act, any such amendment shall be made only after the Committee determines whether such amendment would constitute the grant of a new Stock Right. Notwithstanding the foregoing, the Committee may not reprice any Options, either directly through a reduction of the exercise price or indirectly by cancellation of outstanding Options in return for an immediate grant of Options with a lower exercise price.

25. EMPLOYMENT OR OTHER RELATIONSHIP

Nothing in this Plan or any Stock Agreement shall be deemed to prevent the Company or an Affiliate from terminating the employment, consultancy or director status of a Participant, nor to prevent a Participant from terminating his or her own employment, consultancy or director status or to give any Participant a right to be retained in employment or other service by the Company or any Affiliate for any period of time.

26. GOVERNING LAW

This Plan shall be construed and enforced in accordance with the law of The Commonwealth of Massachusetts.

Exhibit 10.9

EMPLOYMENT AGREEMENT

THIS AGREEMENT, dated as of 3rd October, 1994 (the "Effective Date"), is made by and among VERTEX PHARMACEUTICALS INCORPORATED, a Massachusetts corporation ("Vertex"), its wholly-owned subsidiary, VERTEX PHARMACEUTICALS (EUROPE) LIMITED, a U.K. limited liability company (the "Company"), and IAIN P.M. BUCHANAN (the "Executive").

Recitals:

The Company wishes to engage the services of the Executive as a key employee of the Company and the Executive wishes to perform such services. The Board of Directors of Vertex has determined that it is in the best interests of the Company and Vertex to assure that the Company will have the continued dedication of the Executive. The Board believes that it is important to encourage the Executive's full attention and dedication to the Company currently and in the event of any threatened or pending Change of Control of Vertex (as hereinafter defined), and to provide the Executive with compensation arrangements which provide the Executive with individual financial security in the event of certain terminations of employment, including termination upon a Change of Control, and which are competitive with those of other corporations. In order to accomplish these objectives Vertex, the Company and the Executive agree as follows:

1. Definitions. For purposes of this Agreement:

1.1 "Cause" shall mean (i) the willful and continued failure by the Executive to substantially perform his duties with the Company (other than any such failure resulting from the Executive's incapacity due to physical or mental illness or any such failure after the issuance of a notice of termination in accordance with Section 11.8 by the Executive for Good Reason, as hereinafter defined) after a written demand for substantial performance is delivered to the Executive by the Board of Directors of Vertex, which demand specifically identifies the manner in which the Board believes that the Executive has not substantially performed his duties, or (ii) the willful engaging by the Executive in conduct which is demonstrably and materially injurious to the Company, monetarily or otherwise, or (iii) any conduct on the part of the Executive (whether or not in the course of his duties) which, in the reasonable opinion of the Board, has or is likely to bring himself, the Company or Vertex into serious disrepute, or which causes the Board to lose all trust and confidence in him, or (iv) the voluntary resignation by the Executive of his office as a director of the Company or his disqualification from being a director, or (v) the Executive becoming bankrupt or making any arrangement or composition with his creditors generally.

1.2 "Disability" shall have the same meaning as in the Company's long-term disability insurance coverage in effect on the applicable date, or, if the Company carries no such insurance, the Executive's inability to perform the Executive's duties hereunder for a period of 90 consecutive days by reason of physical or mental illness or incapacity.

1.3 "Good Reason" shall mean:

(i) at any time during the term hereof, without the Executive's express written consent, the occurrence of any of the following:

(a) a substantial adverse alteration in the nature or status of the Executive's position or responsibilities or the condition of his employment;

(b) a reduction by the Company in the Executive's annual base salary;

(c) the failure by the Company to pay to the Executive any portion of his current compensation or compensation under any deferred compensation program of the Company within seven (7) days after the date such compensation is due;

(d) any purported termination by the Company of the Executive's employment which is not effected pursuant to a notice of termination satisfying the requirements of the applicable provisions of this Agreement, which purported termination shall not be effective for purposes of this Agreement;

(e) any act or omission to act on the part of the Company which causes the Executive to lose all trust and confidence in it as his employer; or

(ii) during the nine (9) month period following a Change in Control of Vertex (as hereinafter defined):

(a) the assignment to the Executive of any duties inconsistent in any respect with the Executive's position (including status, offices, titles, and reporting requirements), authority, duties or responsibilities as contemplated by Section 4 of this Agreement or any other action by the Company which results in a diminishment in such position, authority, duties or responsibilities; or

(b) the failure by the Company to continue in effect after such Change in Control any material compensation or benefit plan in which the Executive participates immediately prior to such Change in Control, unless an equitable arrangement has been made with respect to such plan, on a basis not materially less favorable, both in terms of the amount of benefits provided and the level of his participation relative to other participants, or the failure of the Company to continue the Executive's participation therein (or in such substitute or alternative plan); or

(iii) the failure of the Company or Vertex to obtain a satisfactory agreement from any successor to assume and agree to perform this Agreement, as contemplated in Section 11.5.1 hereof

1.4 "Change in Control" shall mean a change in control of Vertex of a nature that would be required to be reported in response to Item 6(e) of Schedule 14A of Regulation 14A promulgated under the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"), whether or not Vertex is in fact required to comply therewith; provided, that, without limitation, a Change in Control shall be deemed to have occurred if:

(A) any individual, firm, corporation or other entity ("Person") becomes an Acquiring Person (as hereinafter defined), except to the extent that such Person is deemed to have acquired Beneficial Ownership (as hereinafter defined) of 20% or more of the voting shares of Vertex because all or some of such voting shares were acquired pursuant to an Approved Transaction (as hereinafter defined);

(B) during any period of twenty-four (24) consecutive months (not including any period prior to the Effective Date), individuals who at the beginning of such period constitute the Board of Directors of Vertex and any new directors (other than a director designated by a person who has entered into an agreement with Vertex to effect a transaction described in paragraphs (A), (C) or (D) of this section) whose election by the Board of Directors of Vertex or nomination for election by the stockholders of Vertex was approved by a vote of at least two-thirds (2/3) of the directors then still in office who either were directors at the beginning of such period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof; or

(C) the stockholders of Vertex approve a merger or consolidation of Vertex with any other corporation, other than (a) a merger or consolidation which would result in the voting shares of Vertex outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting shares of the surviving entity) at least 50% of the combined voting shares of Vertex or such surviving entity outstanding immediately after such merger or consolidation or (b) a merger or consolidation effected to implement a recapitalization of Vertex (or similar transaction) in which no Person becomes an Acquiring Person; or

(D) the stockholders of Vertex approve a plan of complete liquidation of Vertex or an agreement for the sale or disposition by Vertex

of all or substantially all of Vertex's assets.

For purposes hereof:

1.4.1 "Acquiring Person" shall mean any Person who or which, together with all Affiliates and Associates of such Person, shall be the Beneficial Owner of 20% or more of the shares of the voting shares of Vertex then outstanding, but shall not include Vertex, any subsidiary of Vertex, any employee benefit plan of Vertex or any subsidiary of Vertex, any entity holding Common Shares for or pursuant to the terms of any such plan, or any Person who, alone or together, with all Affiliates and Associates of such Person, is, as of the Effective Date of this Agreement, the Beneficial Owner of 20% or more of the voting shares of Vertex. Notwithstanding the foregoing, no Person shall become an "Acquiring Person" as the result of an acquisition of Common Shares by Vertex which, by reducing the number of shares outstanding, increases the proportionate number of shares beneficially owned by such Person to 20% or more of the voting shares of Vertex outstanding; provided, however, that if a Person shall become the Beneficial Owner of 20% or more of the Common Shares of Vertex then outstanding by reason of share purchases by Vertex and shall, after such share purchases by Vertex, become the Beneficial Owner of any additional voting shares of Vertex, then such Person shall be deemed to be an "Acquiring Person".

1.4.2 "Affiliates" and "Associates" shall have the respective meanings ascribed to such terms in Rule 12b-2 of the General Rules and Regulations under the Exchange Act.

1.4.3 "Beneficial Owner" and "Beneficial Ownership" shall have the respective meanings ascribed to such terms in Rule 13d-3 of the General Rules and Regulations under the Exchange Act.

1.4.4 "Approved Transaction" shall mean any purchase of Beneficial Ownership of voting shares of Vertex directly from Vertex in a transaction expressly and affirmatively approved by a vote of at least two thirds (2/3) of those members of the Board of Directors of Vertex, voting separately and as a subclass of directors on such transaction, who are not and do not, pursuant to such transaction, become Acquiring Persons or Affiliates or Associates of an Acquiring Person or representatives of an Acquiring Person or of any such Affiliate or Associate.

2. Employment.

The Company hereby agrees to employ the Executive, and the Executive hereby accepts employment by the Company, upon the terms and conditions set forth herein and in the schedules to this Agreement.

3. Effective Date and Term.

This Agreement shall take effect as of the Effective Date, and shall continue in full force and effect until terminated in accordance with the provisions of this Agreement. The provisions of Sections 6 and 7 of this Agreement shall survive any termination or expiration of this Agreement, in accordance with their terms.

4. Title and Duties.

The Executive shall promote the business and affairs of the Company as Managing Director of the Company, with responsibility for performing such duties consistent with such position as the Board of Directors of the Company may from time to time designate. In addition, the Executive shall serve as Vice President-Europe of Vertex, with responsibility for performing such duties consistent with such position as the Chief Executive Officer of Vertex may from time to time designate. Except as otherwise provided in this Agreement and except for vacations and absences due to temporary illness in accordance with Company policies in effect from time to time, the Executive shall devote his full working time and efforts to the business and affairs of the Company, and shall comply, to the best of his abilities, with all reasonable directions given him by the Board of Directors of the Company or the Chief Executive Officer of Vertex.

5. Compensation and Benefits.

In consideration for the services rendered by the Executive under this Agreement, the Executive shall receive a base salary as determined annually by the Compensation Committee of the Board of Directors of Vertex or by the full Board of Directors of Vertex, and such bonuses, stock option grants and other compensation as may be determined from time to time by the Compensation Committee or the Board of Directors of Vertex. In addition, the Executive shall be entitled to such life insurance, health insurance and other employee benefits as may be offered or generally made available by the Company to its executive employees from time to time, and which are at least substantially equivalent to those offered or generally made available to Vertex's United States executive

employees and which are described in Schedule 1 to this Agreement.

6. Termination; Severance.

6.1 Death. In the event of termination by reason of the Executive's death, the Executive's estate shall not be entitled to any compensation or benefits hereunder accruing after the date of death, except as otherwise provided under the Company's benefit plans as then in effect.

6.2 Disability. In the event of the Executive's Disability, the Executive's employment hereunder shall terminate, at the election of the Company, upon not less than thirty (30) days prior written notice duly given to the Executive, unless the Executive shall have returned to the full-time performance of his duties hereunder prior to the effective date of such termination. In the event of any dispute concerning the existence of a Disability, such question shall be determined by a licensed physician selected by the Company and reasonably acceptable to the Executive, whose determination shall be final and binding upon the parties. The Executive shall submit to such examinations and furnish such information as such physician may reasonably

request. In the event of termination by reason of Disability, the Executive shall not be entitled to any compensation or benefits hereunder accruing after the effective date of termination, except as otherwise provided under the Company's benefit plans as then in effect.

6.3 Termination for Cause. The Company may terminate the Executive's employment hereunder at any time for Cause by written notice duly given to the Executive. No such notice of termination for Cause shall be effective unless accompanied by a copy of a resolution duly adopted by the affirmative vote of not less than two-thirds (2/3) of the entire membership of the Board of Directors of Vertex (after reasonable notice to the Executive and an opportunity for the Executive to be heard before the Board), finding that in the good faith opinion of the Board the Executive was guilty of the conduct set forth in
Section 1.1 and specifying the particulars in detail. In the event of termination for Cause, the Executive shall not be entitled to any compensation or benefits hereunder accruing after the effective date of termination, except as otherwise provided under the Company's benefit plans as then in effect.

6.4 Termination Without Cause. The Company may terminate the Executive's employment hereunder without Cause by written notice duly given to the Executive not less than six (6) months prior to the effective date of such termination. Except as otherwise provided in Section 7 with respect to a termination after a Change in Control, or as otherwise provided under the Company's benefit plans as then in effect, the Executive shall not be entitled to any compensation or benefits hereunder accruing after the effective date of termination. The Company reserves the right to pay salary (less statutory deductions) in lieu of notice.

6.5 Termination by the Executive. The Employee may terminate his employment hereunder effective as of any date on or after 3 October 1995 upon not less than six (6) months prior written notice to the Company. Notwithstanding anything in this Agreement to the contrary, a termination of employment by the Executive for Good Reason pursuant to written notice duly given in accordance with Section 11.8 shall be deemed a termination of the Executive by the Company without Cause, and not a voluntary termination by the Executive. Except as otherwise provided in Section 7 with respect to a termination after a Change in Control, in the event of termination for Good Reason, the Executive shall be entitled to severance pay in an amount equal to six (6) months' base salary (as in effect on the date the notice of termination is given, payable in a lump sum within ten (10) business days after the effective date of termination.

6.6 Reduction for Certain Payments. Any payments to be made under this Agreement following the termination of the Executive's employment pursuant to any provision of this Agreement shall be reduced by an amount equal to any amount(s) which the Company may then be obliged to pay to the Executive as a result of that termination pursuant to the Employment Protection (Consolidation) Act 1978 by way of a statutory redundancy payment, a Basic Award and/or the maximum Compensatory Award.

7. Change in Control

7.1 Termination Following Change in Control. Notwithstanding anything in this Agreement to the contrary, if the Executive's employment is terminated after a Change in Control shall have occurred, either (i) by the Company without Cause, or (ii) by the Executive for Good Reason, the Executive shall, in accordance with the resolution of the Company of even date herewith approving the terms of this contract and, in particular, the payment envisaged by this clause, be entitled to the following benefits:

7.1.1 The Company shall pay the Executive his full base salary up to and including the date of termination at the rate in effect on the date the notice of termination is

given, plus all other amounts to which he is entitled under any compensation or benefit plan of the Company as of the date of termination.

7.1.2 In compensation for the Executive's likely loss of earnings by reason of the early termination of his employment and any consequent disruption to his career prospects, the Company shall pay as severance pay to the Executive a lump sum payment equal to three (3) times the sum of (i) the Executive's annual rate of base salary in effect immediately prior to the Change in Control, and (ii) the average of the last two annual bonuses (annualized in the case of any bonus paid with respect to a partial year) paid to the Executive preceding the Change in Control, payable within ten (10) business days after the date of termination. The amount payable pursuant to this Section 7.1.2 shall be reduced by the amount of any payments made in lieu of notice or severance pay pursuant to Sections 6.4 or 6.5.

7.1.3 All rights, options and awards held by the Executive under any stock option, stock purchase or other equity incentive plan or agreement of the Company or Vertex shall be fully vested and not subject to forfeiture or repurchase on account of the termination of employment, notwithstanding any provision to the contrary contained in such plan or agreement.

7.1.4 For three (3) years after the date of termination, the Company shall provide the Executive with life, disability, accident and health insurance benefits substantially similar to those which the Executive was receiving immediately prior to the Change in Control. Benefits otherwise receivable by the Executive pursuant to this Section 7.1.4 shall be reduced to the extent comparable benefits are actually received by the Executive from a subsequent employer during such period, and any such benefits actually received by the Executive shall be reported to the Company.

7.1.5 The Company shall also pay to the Executive, within ten (10) business days after any such fees or expenses are incurred, all legal fees and expenses incurred by the Executive as a result of or in connection with such termination, including all such fees and expenses, if any, incurred in seeking to obtain or enforce any right or benefit provided by this Agreement or in connection with any tax audit or proceeding to the extent attributable to the application of Section 4999 of the U.S. Internal Revenue Code of 1986, as amended (the "Code"), to any payment or benefit provided hereunder.

7.2 No Mitigation. The Executive shall not be required to mitigate the amount of the severance payment or any other benefit provided under this Section 7 by seeking other employment or otherwise, nor shall the amount of any payment or benefit provided for in this Section 7 be reduced by any compensation earned by the Executive as the result of employment by another employer, by retirement benefits, by offset against any amount claimed to be owed by the Executive to the Company, or otherwise, except to the extent expressly so provided.

8. AGREEMENT NOT TO COMPETE.

The Executive acknowledges the unique nature of the business of Vertex and the need of Vertex to maintain its competitive advantage in the industry through the protection of its trade secrets and proprietary information. Accordingly, the Executive agrees that for a period of one (1) year after the termination of his employment, the Executive shall not, directly or indirectly, within the United States of America or its territories or possessions or within any other country in which Vertex conducts or plans to conduct its business or distributes any of its products or renders any services (determined in each case as of the employment termination date and in relation only to those aspects of its business and those products and services with which the Executive shall have had a material involvement), engage in business with, own an interest in, be employed by, or consult or advise for, any person or entity (except as a holder of not more than a two percent (2%) equity interest in a publicly-traded entity) which is in competition with the

business of Vertex, provided that the foregoing shall not preclude the Executive's employment by any multi-divisional employer having a division which engages in activities in competition with the business of Vertex so long as the Executive shall not be involved in the operations or management of such competitive division. For purposes hereof, an entity shall be deemed to be in competition with the business of Vertex if it is engaged in the discovery of novel pharmaceuticals, using structure-based rational drug design as its primary research methodology.

The Executive further agrees that for a period of one (1) year after termination of this Executive's employment hereunder he will not, directly or indirectly:

(i) endeavor to entice away from the Company or Vertex any senior employee or consultant employed or engaged in a sales or technical capacity with whom he shall have worked at any time during the period of 12 months preceding the termination of his employment; or

(ii) solicit the custom of any client, supplier, customer or business partner of the Company or Vertex with whom or which the Executive shall have dealt personally to any material extent during the period of 12 months preceding the termination of his employment or in relation to which he shall possess any confidential information or seek by any means to induce such client, supplier, customer or business partner to terminate his, her or its relationship with the Company or Vertex.

9. FREEDOM TO CONTRACT.

The Executive represents that he is free to enter into this Agreement, that he has not made and will not make any agreements in conflict with this Agreement. The Executive will not, and the Company will not require the Executive to, disclose to the Company, or use for the Company's benefit, any trade secrets or confidential information now or hereafter in the Executive's possession which is the property of any other party. In particular, the Executive agrees to be bound by the terms of the Employee Non-Disclosure and Inventions Agreement attached as Schedule 2 hereto.

10. REMEDIES.

The parties agree and acknowledge that the rights and obligations set forth under this Agreement are of a unique and special nature and that the Company and Vertex are, therefore, without an adequate legal remedy in the event of Executive's violation of the covenants set forth in this Agreement. The parties agree, therefore, that the covenants made by the Executive under this Agreement shall be specifically enforceable in equity, in addition to all other rights and remedies, at law or in equity or otherwise (including termination of employment) that may be available to the Company or Vertex.

11. PROVISIONS OF GENERAL APPLICATION.

11.1 Governing Law. This Agreement and the rights and obligations of the parties hereunder shall be construed, interpreted and determined in accordance with the laws of England and Wales.

11.2 Other Agreements. This Agreement represents the entire understanding and agreement between the parties as to the subject matter hereof and supersedes all prior or concurrent oral or written agreements relating thereto, including without limitation the Consulting Agreement between the parties dated 5 April 1994.

11.3 Amendment. This Agreement may be amended only by a written instrument executed in one or more counterparts by the parties hereto.

11.4 Waiver. No consent to or waiver of any breach or default in the performance of any obligation hereunder shall be deemed or construed to be a consent to or waiver of any other breach or default in the performance of any of the same or any other obligation hereunder. Failure on the part of either party to complain of any act or failure to act of the other party or to declare the other party in default, irrespective of the duration of such failure, shall not constitute a waiver of rights hereunder and no waiver hereunder shall be effective unless it is in writing, executed by the party waiving the breach or default hereunder.

11.5 Successors; Binding Agreement.

11.5.1 Each of the Company and Vertex shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of its business or assets to expressly assume and agree to perform this Agreement in the same manner and to the same extent that it would be required to perform it if no such succession had taken place. Failure of the Company or Vertex to obtain such assumption and agreement prior to the effectiveness of any such succession shall be a breach of this Agreement and shall entitle the Executive to compensation from the Company, Vertex or their respective successors in the same amount and on the same terms as he would be entitled to hereunder if he terminates employment for Good Reason following a Change in Control, except that for purposes of implementing the foregoing, the date on which any such succession becomes effective shall be deemed the Date of Termination. As used in this Agreement, "Company" and "Vertex" shall mean the Company and Vertex, respectively, as hereinbefore defined and any successor to its business or assets as aforesaid which assumes and agrees to perform this Agreement by operation of law, or otherwise.

11.5.2 This Agreement shall inure to the benefit of and be enforceable by the Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

11.6 Headings. The headings of sections and subsections of this Agreement have been inserted for convenience of reference only and shall not be deemed to be a part of this Agreement or to affect the meaning of any of its provision.

11.7 Severability. If any provision of this Agreement shall, in whole or in part, prove to be invalid for any reason, such invalidity shall affect only the portion of such provision which shall be invalid, and in all other respects this Agreement shall stand as if such invalid provisions, or the invalid portion thereof, had not been a part hereof.

11.8. Notices and Other Communications. All notices and other communications required hereunder shall be in writing and personally delivered or sent by certified mail, return receipt requested (a) if to the Executive at Briar House, Bagwell Lane, Odiham, Hampshire, RG25 1JQ; and (b) if to the Company, at 5 Cheapside Court, Buckhurst Road, Ascot, Berkshire, UK, SL5 7RF; and (c) if to Vertex at 40 Allston Street, Cambridge, MA 02139-4211 USA, attention: Chief Executive Officer; or in each case to such other persons or addresses as the parties hereto may specify by a written notice to the other from time to time. Such notices shall be effective four (4) business days after so mailed or, if earlier, upon actual receipt. In order to be effective, any notice of a purported termination of the Executive's employment by the Company or by the Executive shall be communicated by writing to the other party in accordance with this Section 11.8, indicating the specific termination provision in this Agreement relied upon and setting forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of the Executive's employment under the provision so indicated.

12. STATUTORY PARTICULARS OF EMPLOYMENT.

The particulars required to be given to the Executive by Section 1 of the Employment Protection (Consolidation) Act, 1978 and which are not given elsewhere in this Agreement are set out in schedule 1 to this Agreement.

IN WITNESS WHEREOF, this Agreement has been executed by the Company, by its duly authorized officer, and by the Executive, as of the date first above written.

VERTEX PHARMACEUTICALS (EUROPE) LIMITED	*EXECUTIVE:*
By: /s/ Richard H. Aldrich *---------- Richard H. Aldrich* *Director*	*/s/ Iain P.M. Buchanan* *Iain P.M. Buchanan*

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Joshua S. Boger
---------- Joshua S. Boger
President and Chief Executive Officer

SCHEDULE 1

STATUTORY PARTICULARS OF EMPLOYMENT

1. This Statement sets out the particulars required by Section 1 of the Employment Protection (Consolidation) Act 1978 relating to the employment by VERTEX PHARMACEUTICALS (EUROPE) LIMITED (the "Company"), of 5 Cheapside Court, Buckhurst Road,

Ascot, Berkshire, SL5 7RF of IAIN P.M. BUCHANAN of Briar House, Bagwell Lane, Odiham, Hampshire, RG25 1JQ.

2. PERIOD OF EMPLOYMENT

2.1 Your employment by the Company began on 3rd October, 1994. No previous period of employment is continuous with your employment by the Company.

2.2 Your employment is subject to termination by you or the Company upon notice as set forth in the attached Employment Agreement.

3. JOB TITLE

3.1 Your job title is Vice President of European Operations of Vertex Pharmaceuticals Incorporated and and Managing Director of the Company.

3.2 In addition to the usual duties of a Managing Director, you may be required to undertake other duties, compatible with your status, from time to time to suit the Company's business needs.

3.3 You are required to report on a regular basis to the Board of the Company and the Board of Vertex Pharmaceuticals Inc. ("Vertex"), providing such details of your activities and other information as they may reasonably require, and to carry out, promptly, efficiently and to the best of your abilities all reasonable and lawful instructions which they may give you from time to time.

3.4 You must devote the whole of your time, attention and abilities during your hours of work to your duties for the Company. You may not, under any circumstances, whether directly or indirectly, undertake any other employment or engagement of any kind during the period of your employment by the Company.

4. SALARY

4.1 Your basic salary is(pound)100,020 per annum.

4.2 Your salary will be paid monthly in arrears by credit transfer on or about the 25th day of each month.

4.3 Personal Performance-related bonus payments may be made from time to time at the Company's discretion.

5. NORMAL HOURS OF WORK

5.1 Your normal hours of work are the Company's standard business hours from 8 am to 5 pm each weekday together with such additional unpaid hours, either on weekdays or weekends, as may be necessary for the proper performance of your duties.

6. HOLIDAY ENTITLEMENT

6.1 The Company's holiday year is the calendar year from 1st January to 31st December. However, your holiday entitlement, during the one-year term of this appointment will be 20 working days' holiday in addition to the normal English public and Bank holidays. Your holiday must be taken during the holiday year and your holiday dates agreed in advance by the Board of Vertex and the Company

6.2 When your employment ceases, you will (unless your employment is terminated by the Company for Cause) be paid in lieu of any unused holiday. If you have taken too much holiday, you will be required to repay any salary received for additional holiday days. One day's holiday pay will be deemed to be 1/260th of your annual basic salary.

7. CAR

7.1 You will be provided with a Company car for your business and personal use in accordance with and subject to the Company's car policy from time to time. The Company will bear all standing and running costs of the car but reserves the right in its absolute discretion to withdraw the use of the car from you at any time for any reason without compensation. You must, in any event, return the car to the Company's head office upon termination of your employment.

7.2 It is a condition of your employment that you have and keep a current driving licence. If you are disqualified from driving for any

period, the Company reserves the right to dismiss you. If you commit any motoring offence or the car suffers or causes any accidental damage, you must notify the Company immediately.

8. EXPENSES

8.1 The Company will reimburse to you all expenses properly incurred by you in the proper performance of your duties, provided that on request you provide the Company with such vouchers or other evidence of actual payment of such expenses as the Company may reasonably require.

9. PENSION

9.1 You will be eligible to join the Vertex Personal pension scheme, subject to and in accordance with its trust deed and rules from time to time. The Company will contribute an amount equal to 10% of your salary and requires you to contribute 5% of your salary. You will hold the option to contract out of the State Earnings Related Pension Scheme (SERPS).

10. OTHER BENEFITS

10.1 You will receive Private Health Insurance (BUPA) with subsidised rates for dependants.

10.2 You will be covered by the Company's death-in-service life assurance scheme for two times your annual basic salary including dependant's benefit of approximately four-ninths of basic salary.

10.3 You will be granted a Stock Option over stock in Vertex under the terms of its 1991 Stock Option Plan on such terms as may be designated by the Board of Vertex. Details of your grant are outlined under a separate letter.

10.4 You will also be eligible to participate in the Vertex Employee Stock Purchase Plan on such terms as the Board of Vertex may decide. This will enable you to withdraw up to 10% of your net salary to purchase registered Vertex common stock at fair market value at the beginning or end of each six-month withholding period, whichever is the lower.

11. PLACE OF WORK

11.1 Your normal place of work will be Cheapside Court, Ascot and/or any other UK place of business of the Company from time to time. You will be given at least one month's notice of any such change. The Company may, at its discretion, contribute towards any removal costs which you may incur should your place of work be changed to one which is more than fifty miles away from your previous place of work.

12. CONFIDENTIALITY

12.1 You agree to treat as confidential all trade secrets and other confidential information relating to the Company's and Vertex's business and to sign and be bound by the terms of the Employee Non-Disclosure and Inventions Agreement, of which you have a copy.

12.2 You agree to return to the Company at the end of your employment all documents, computer disks and other items which belong to the Company or Vertex or relate to their business.

12.3 You will be responsible for the security of all keys, codes, electronic passes and combinations to security locks given to you by the Company to use in the course of your employment. You may not lend any of them or disclose combination numbers to any unauthorised person at any time after the end of your employment.

13. SICKNESS ABSENCE

13.1 If you are unable to come to work for any reason and your absence has not been previously authorised by the Company, you must inform the Company immediately and keep the Company regularly informed of your progress and likely return date. For any absence of less than seven consecutive days, you are required to certify in writing the reasons for your absence. A doctor's certificate is required for all periods of absence in excess of seven days.

13.2 If you are absent from work due to sickness or injury and have complied with the requirements of clause 13.1. you will be paid:

13.2.1 Your entitlement to Statutory Sick Pay ("SSP") (if any) in accordance with the provisions of the Social Security Contributions and Benefits Act 1992. For Statutory Sick Pay purposes your qualifying days are Monday to Sunday.

13.2.2 Company Sick Pay (if the Company so decides from time to time), consisting of discretionary payments of all or part of your basic salary (less any entitlement to SSP and/or other state sickness benefits) for up to a maximum of 13 weeks'

absence in any 12-month period.

13.2.3 An amount equal to any sums receivable by the Company, as a result of your absence, under the terms of its permanent health insurance scheme.

14. DISCIPLINARY & GRIEVANCE PROCEDURE

14.1 There are no particular disciplinary rules or procedures applicable to you and you are expected to conduct yourself in a thoroughly professional manner at all times. If you have any grievance relating to your employment, you should raise the matter with the Board of the Company, whose decision will be final and binding on you.

15. HEALTH & SAFETY AT WORK

15.1 The Company will take all reasonably practicable steps to ensure your health, safety and welfare when at work. In the interests of all employees, the Company operates a no-smoking policy.

16. MISCELLANEOUS

16.1 The Company reserves the right to make reasonable changes to any of your terms and conditions of employment.

16.2 The Company has the right to deduct from your pay any sums which you may owe the Company, and you agree to the Company making such deductions.

16.3 There are no collective agreements in force which directly affect your terms and conditions of employment.

16.4 The Company has no immediate requirement for you to work outside the United Kingdom for a period of one month or more.

16.5 The terms and conditions of your employment shall be governed by and construed in accordance with English law.

Exhibit 10.10

December 21, 2000

CONFIDENTIAL

Richard H. Aldrich
75 Cambridge Parkway, #E702
Cambridge, MA 02139

Dear Rich:

This will confirm our conversation regarding your separation from Vertex Pharmaceuticals Incorporated ("Vertex").

Your employment with Vertex will terminate effective as of June 21, 2002 (the "Termination Date"). You will remain an employee of the Company, subject to all your obligations as an employee of Vertex, between now and the Termination Date.

Effective immediately, Vertex accepts your resignation from office as Senior Vice President and Chief Business Officer and Clerk of Vertex, Director of Vertex Pharmaceuticals (Europe) Limited and Clerk of Vertex Securities Corp., and from any and all other officerships and directorships of Vertex and its subsidiaries. In addition, you will cease to serve as Vertex's representative on the Board of Directors of Altus Biologics Inc.

Vertex will continue to pay you your usual salary, at the biweekly rate of $11,311 less all applicable taxes and other withholdings, through the Termination Date. Your base salary will be subject to review annually by the Compensation Committee of the Board or by the full Board in accordance with Vertex's usual practices, but will not be less than the biweekly rate of $11,311, and you will be eligible to receive such bonuses, stock option grants and other compensation as may be determined from time to time by the Compensation Committee or the Board.

In addition, through the Termination Date you will be entitled to such life insurance, health insurance and other employee benefits as may be offered or generally made available by Vertex to its executive employees from time to time.

In addition to your regular benefits described above, if you accept the offer below, the following terms and conditions will apply:

1. Vertex will grant you stock options for the purchase of 75,000 shares of Vertex Common Stock at an exercise price equal to the Fair Market Value per share of Vertex Common Stock on the date of grant, as determined under the 1996 Stock and Option Plan. Such options will vest over a period of 18 months, in 6 quarterly installments from the date of grant.

2. Vertex will pay you a cash bonus for the year 2000 in the amount of $100,000.

3. Neither party will knowingly make any statement, take any action, or conduct himself or itself in any way that such party has reason to believe may adversely affect the reputation of, or goodwill toward, the other.

4. You acknowledge the unique nature of the business of Vertex and the need of Vertex to maintain its competitive advantage in the industry through the protection of its trade secrets and proprietary information. Accordingly, you agree that through the Termination Date and for a period of one (1) year thereafter, you shall not, directly or indirectly, within the United States of America or its territories or possessions or within any other country in which Vertex conducts or plans to conduct its business or distributes any of its products or renders any services (determined as of the effective date of this agreement), engage in business with, own an interest in, be employed by, or consult or advise for, any person or entity (except as a holder of not more than a two percent (2%) equity interest in a publicly-traded entity) which is in competition with the business of the Company, provided that the foregoing shall not preclude your employment by any multi-divisional employer having a division which engages in activities in competition with the business of Vertex so long as you are not be involved in the operations or management of such competitive division. For purposes hereof, an entity shall be deemed to be in competition with the business of Vertex if it is engaged in the discovery of novel pharmaceuticals, using structure-based rational drug design as its primary research methodology. You further agree that through the Termination Date and for a period of at least one (1) year after Termination Date you will not solicit any other employee of or consultant or advisor to, or client, supplier, customer or partner of Vertex to terminate his, her or its relationship with Vertex.

5. Upon your acceptance of these terms, you hereby remise, release and forever discharge Vertex, its predecessors and successors in interest, and its shareholders, directors, agents, attorneys, employees, assigns and heirs ("the Releasees") of and from any and all debts, demands, actions, causes of action, suits, accounts, covenants, contracts, guarantees, bonds, warrantees, agreements, torts, damages, statutes, and any and all claims and liabilities whatsoever of every name and nature, both in law and in equity, including without limitation claims under the Americans with Disabilities Act, the Family Medical Leave Act, the federal Age Discrimination in Employment Act, and the Older Workers Benefits Protection Act, and claims of discrimination of any kind, however arising, which you may have or have had, against the Releasees, or which are based on facts on which you now have knowledge, and specifically (but without limiting the generality hereof) on account of or arising out of or in connection with your employment by Vertex and the cessation thereof; provided that the foregoing shall not apply to any events occurring after the date of this agreement.

Upon your acceptance of these terms, Vertex hereby remises, releases and forever discharges you, your assigns and heirs of and from any and all debts, demands, actions, causes of action, suits, accounts, covenants, contracts, guarantees, bonds, warrantees, agreements, torts, damages, statutes, and any and all claims and liabilities whatsoever of every name and nature, both in law and in equity, however arising, which you may have or have had, against you, your assigns and heirs, or which are based on facts on which Vertex now has knowledge, and specifically (but without limiting the generality hereof) on account of or arising out of or in connection with your

employment by Vertex and the cessation thereof; provided that the foregoing shall not apply to any events occurring after the date of this agreement.

6. You acknowledge that you have carefully read and understand all the provisions of this agreement and you are voluntarily entering into this agreement. You have not relied upon any representation or any statement not set forth herein with regard to the subject matter, basis or effect of this agreement or otherwise.

7. If you accept these terms, this agreement sets forth the entire agreement between you and Vertex, and fully supersedes any and all prior agreements or understandings between the parties hereto pertaining to the subject matter hereof; provided, however, that your Employee Non-Disclosure and Inventions Agreement will remain in full force and effect in accordance with its terms, and your Vertex stock option agreements will remain in full force and effect in accordance with their respective terms and the terms of the plans under which they were granted.

8. This agreement shall be binding upon the parties hereto and their heirs, representatives, successors and assigns.

9. If any provision of this agreement should be determined to be unenforceable by any court of law, the remaining provisions shall be severable and enforceable in accordance with their terms.

10. This agreement will be governed by, and construed in accordance with, the laws of the Commonwealth of Massachusetts.

I urge you to consult with an attorney of your choice regarding this offer. You will have 21 days to consider this offer and, if you accept, you will have 7 days after you accept the offer within which you may rescind your acceptance. This Agreement will not become effective until the 7-day rescission period has passed. If you wish to accept the above offer, please sign below and return one copy of this letter to me not later than 5:00 p.m. on December 28, 2000, or this offer will expire automatically.

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Joshua S. Boger

Joshua S. Boger
Chief Executive Officer

ACCEPTED AND AGREED:

/s/ Richard H. Aldrich

Richard H. Aldrich

21 December 2000
Date

EXHIBIT 10.14

The Company has omitted from this Exhibit portions of the Lease for which the Company has requested confidential treatment from the Securities and Exchange Commission. The portions of the Lease for which confidential treatment has been requested have been deleted and marked with asterisks surrounded by brackets ([****]) and have been filed separately with the Securities and Exchange Commission.

THIRD AMENDMENT TO LEASE

This THIRD 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 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 at40 Erie Street, Cambridge, Massachusetts (the "Building"), as more particularly described in the lease, as amended by a First Amendment to Lease (the "First Amendment") and a Second Amendment to Lease (the "Second Amendment"). The lease, Fist Amendment to Lease and Second Amendment to Lease are herein collectively referred to as the "Lease".

WHEREAS, the tenant has requested, and the Landlord has agreed, to further amend the Lease upon the terms and conditions set forth in this Third Amendment to Lease.

WHEREAS, Landlord and Tenant desire to amend and modify the terms of the Lease and to ratify and confirm the terms of the Lease as amended by the First Amendment and the Second 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 the legal sufficiency of which is hereby acknowledged, landlord and Tenant agree as follows:

1. Each capitalized term which is used but not defined herein shall have the respective meaning ascribed thereto in the Lease.

2. Section 1 of the Second Amendment (other than the last sentence thereof) is hereby deleted in its entirety.

3. Effective as of October 1, 1998 (the "Effective Date"), 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 to the Second Amendment for the layout of the Additional Space.

4. The first paragraph of Section 2 of the Second Amendment is hereby deleted in its entirety and the following is inserted in place thereof:

The term "Additional Space Term" as used in the Lease shall mean the period commencing on the Effective Date and terminating on March 18, 2009.

5. Section 5 of the Second Amendment is hereby deleted in its entirety and the following is inserted in place thereof:

5. Commencing on the Effective Date and continuing throughout the Additional Space Term, Tenant shall pay to Landlord Annual Fixed Rent for the Additional Space in the amount of [**CONFIDENTIAL**], subject to adjustment as set forth in the Lease, including Sections 2 and 6 of the Second Amendment. The Annual Fixed Rent for the Additional Space shall be payable in equal monthly installments in advance on the first day of each month and pro-rated for any portion of a calendar month during the Additional Space Term. In accordance with the foregoing, Tenant shall pay
[****] to Landlord on October 1, 1998 and on the first day of each month thereafter until adjustment of Annual Fixed Rent for the Additional Space as set forth in the Lease.

6. Commencing on the Effective Date and continuing to and including March 18, 1999 (the "Parking Term"), Landlord hereby leases to Tenant and Tenant hereby leases from Landlord one hundred twenty (120) parking spaces (Tenant's Additional Parking Spaces") on the Lot upon the terms and conditions hereinafter set forth. Tenant shall pay to Landlord as Additional Rent, together with the payments of Annual Fixed Rent for the Additional Space [**CONFIDENTIAL**] per month for each of Tenant's Additional Parking Spaces, which amount shall be prorated for the month of March, 1999. Tenant shall have the right to sublease any of Tenant's Additional Parking Spaces to Millennium without the consent of Landlord, but Tenant shall remain liable for the monthly rental fee for Tenant's Additional Parking Spaces. Landlord reserves the right from time to time to alter or relocate any or all of Tenant's Additional Parking Spaces on or off the Lot, provided that the total number of parking spaces available to Tenant on or off the Lot is not

decreased and any of Tenant's Additional Parking Spaces relocated off the Lot are located within one thousand (1000) feet of the Building, provided, however, that upon completion of construction by Landlord of the garage at 47 Erie Street, Cambridge, Massachusetts (the "Garage"), the completion of which is expected by March, 1999, any of Tenant's Additional Parking Spaces which have been relocated shall be located in the Garage for the remainder, if any, of the Parking Term.

7. Landlord hereby represents and warrants that Landlord and Millennium have terminated Millennium's lease of the Additional Space and Tenant's Additional Parking Spaces effective as of the Effective Date.

8. Anything in the Lease to the contrary notwithstanding (i) Landlord shall have no obligation to evict Millennium from the Additional Space or Tenant's Additional Parking Spaces or to dispossess Millennium thereof, (ii) Tenant may sublet all or such portion of the Additional Space to Millennium for the period commencing on the Effective Date and terminating on such date within the Term as Tenant and Millennium may agree and on such other terms and conditions as are consistent with and not in violation of the Lease and as Tenant otherwise may deem acceptable, (iii) Tenant may sublet all or such number of

Tenant's Additional Parking Spaces to Millennium for the period commencing on the Effective Date and terminating on or before March 18, 1999 and on such other terms and conditions as are consistent with and not in violation of the Lease, and (iv) any parking spaces subleased by Tenant to Millennium for any period after March 18, 1999 shall consist of parking spaces leased to Tenant pursuant to the Lease and shall not consist of any of Tenant's Additional Parking Spaces.

9. Landlord shall have no liability or obligation to Tenant or Millennium with respect to matters set forth in a letter dated February 5, 1998 from Tenant to Mr. Dan Winny and a letter dated February 20, 1998 from Landlord to Millennium, copies of which are attached hereto as Exhibits A and B respectively, and incorporated herein by reference thereto, including without limitation, any work performed by or on behalf of Millennium with respect to the Additional Space, the restoration thereof and the replacement and/or storage of fixtures removed from the Additional Space by Millennium, and Tenant hereby releases Landlord from all such liabilities and obligations.

10. The Lease, as amended hereby, is hereby ratified and confirmed in all respects.

Executed as of the 1st day of October, 1998:

LANDLORD:

FORT WASHINGTON REALTY TRUST

/s/ David E. Clem, Trustee

David E. Clem, Trustee
And not individually

FORT WASHINGTON REALTY TRUST

/s/ David M. Roby

David M. Roby, Trustee
And not individually

TENANT:

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Richard H. Aldrich

Name:
Title:

EXHIBIT A

[VERTEX LOGO] Vertex Pharmaceuticals Incorporated
130 Waverly Street, Cambridge, MA 02139-4242
Tel. 617-577-6000, Fax 617-577-6680
http://www.vpharm.com

February 5, 1998

Mr. Dan Winny
C/o Lyme Properties/FWLP
P.O. Box 266
On the Common
Lyme, NH 03768

Dear Dan:

I am writing as a follow-up to various conversations and meetings regarding the proposed renovations to FWRC/40 Erie St. by Millennium Pharmaceuticals. By virtue of this letter, I am granting approval to proceed with the work as noted on the official contract drawings submitted. For reference, those drawings are as follows:

Architectural A0, D01, D02, A01, A02, A03 1/23/98	Issued for Approval
Plumbing P1.0, P1.1, P1.2 1/28/98	Issued for Approval
HVAC H1.1, H1.2 1/28/98	Issued for Approval
Electrical E1, E2, E3, E4 1/28/98	Issued for Approval

Regarding the conditions for approval, I would include the following:

1) All areas are to be 100% restored to the condition and function that was existing prior to this work being done. Restoration is to be the same specification as was existing.

2) All fixtures that are removed will be inventoried and kept in secure off-site storage by Millennium. Vertex will approve the

condition of the fixtures prior to going into storage and will also approve the condition when they return for installation to ensure that the fixtures have remained in the same condition while in storage. Millennium will be required to bear the cost of replacing any fixtures that are damaged while in storage.

3) Any change orders to these plans must be approved by Vertex. We will provide approval within 24 hours of receipt of such changes.

4) Millennium is to provide as-built drawings for this work within 30 days of completion of construction.

5) Any interruption in building systems (electrical, fire alarms, plumbing etc.) that requires shutdowns that will affect Vertex must be requested for approval by Vertex no less than 48 hours in advance with either myself or Koji Kubota.

Please accept this letter as authorization to proceed from Vertex. If you need any further information, please let me know. I appreciate being kept up to date as the project progresses.

Sincerely,

/s/ Alfred Vaz, Jr.

Alfred Vaz, Jr.
Vice President Facilities & Operations

EXHIBIT B

Fort Washington Realty Trust
Post Office Box 266
Lyme, New Hampshire 03768
Tel: 603-795-2129
Fax: 603-795-4789

February 20, 1998

Arthur Brunelle
Millennium Pharmaceuticals, Inc.
640 Memorial Drive
Cambridge, MA 02139-4815

Re: Millennium Build-Out Changes at 40 Erie Street

Dear Arthur,

As required by the terms of your lease, the architectural and engineering drawings by D.T.S. Shaw and Associates dated 1/28/98 showing miscellaneous build-out changes have been reviewed by Vertex and by ourselves.

This letter constitutes approval to proceed with the work, subject to conditions. An approval letter from Vertex, dated 2/5/98 from Al Vaz, is attached. The conditions for approval are those listed 1 through 5 in the Vertex letter. You should pay particular attention to Item #3, relating to review of changes. Changes will also be reviewed by us, and as-build record drawings provided to us.

On a related matter, we have reviewed the submittal from D.T.S. Shaw dated 2/10/98 showing the revised location of the generator which is part of the previously reviewed computer room package (plan attached). This location is approved subject to details showing how the trailer is to be supported on the planting area, and to the same conditions relating to building penetrations and treatment of exterior exposed conduits which applied to the previous location. Again, complete restoration is required at the termination of your lease. All work must comply with all applicable codes, ordinances and regulations.

Sincerely,

/s/ David Clem

David Clem,
Trustee
DEC:fp

Cc: Al Vaz
Janet Bush
Chip Crane
Gary Shaw

[VERTEX LOGO] Vertex Pharmaceuticals Incorporated
130 Waverly Street, Cambridge, MA
02139-4242
Tel. 617-577-6000, Fax 617-577-6680
http://www.vpharm.com

February 5, 1998

Mr. Dan Winny
C/o Lyme Properties/FWLP
P.O. Box 266
On the Common
Lyme, NH 03768

Dear Dan:

I am writing as a follow-up to various conversations and meetings regarding the proposed renovations to FWRC/40 Erie St. by Millennium Pharmaceuticals. By virtue of this letter, I am granting approval to proceed with the work as noted on the official contract drawings submitted. For reference, those drawings are as follows:

Architectural A0, D01, D02, A01, A02, A03 1/23/98	Issued for Approval
Plumbing P1.0, P1.1, P1.2 1/28/98	Issued for Approval
HVAC H1.1, H1.2 1/28/98	Issued for Approval
Electrical E1, E2, E3, E4 1/28/98	Issued for Approval

Regarding the conditions for approval, I would include the following:

1) All areas are to be 100% restored to the condition and function that was existing prior to this work being done. Restoration is to be the same specification as was existing.

2) All fixtures that are removed will be inventoried and kept in secure off-site storage by Millennium. Vertex will approve the condition of the fixtures prior to going into storage and will also approve the condition when they return for installation to ensure that

the fixtures have remained in the same condition while in storage. Millennium will be required to bear the cost of replacing any fixtures that are damaged while in storage.

3) Any change orders to these plans must be approved by Vertex. We will provide approval within 24 hours of receipt of such changes.

4) Millennium is to provide as-built drawings for this work within 30 days of completion of construction.

5) Any interruption in building systems (electrical, fire alarms, plumbing etc.) that requires shutdowns that will affect Vertex must be requested for approval by Vertex no less than 48 hours in advance with either myself or Koji Kubota.

Please accept this letter as authorization to proceed from Vertex. If you need any further information, please let me know. I appreciate being kept up to date as the project progresses.

Sincerely,

/s/ Alfred Vaz, Jr.

Alfred Vaz, Jr.
Vice President Facilities & Operations

[GRAPHIC OF GENERATOR LOCATION PLAN, SCHEME 4]

FOURTH AMENDMENT TO LEASE

This FOURTH AMENDMENT TO LEASE (this "Fourth Amendment") is executed 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 (the "Registry") in Book 25422, Page 360 and filed with the Middlesex South Registry District of Land Court (the "Registry District") as Document No. 976230 (the "Landlord") and Vertex Pharmaceuticals Incorporated (the "Tenant").

Reference is hereby made to that certain 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"), a Second Amendment to Lease (the "Second Amendment") and a Third Amendment to Lease (the "Third Amendment"). The lease, First Amendment, Second Amendment and Third Amendment are herein collectively referred to as the "Lease".

WHEREAS, Landlord and Tenant desire to amend and modify the terms of the Lease and to ratify and confirm the terms of the Lease as amended by the First Amendment, the Second Amendment and the Third 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 legal sufficiency of which is hereby acknowledged, Landlord and Tenant agree as follows:

1. Each capitalized term which is used but not defined herein shall have the respective meaning ascribed thereto in the Lease.

2. The definition of "Lot" as set forth in Section 1.1 of the Lease is hereby deleted and the following definition is hereby inserted in place thereof:

The Land shown on Exhibit A-1 to this Fourth Amendment as the "Fort Washington Premises" and more particularly described on Exhibit A-2 to this Fourth Amendment, both of which are attached hereto and incorporated herein by reference thereto.

3. Anything in the Lease to the contrary notwithstanding, references in the Lease to "Exhibit A-1" or "Exhibit A-2", including Section 1.2 of the Lease, shall mean Exhibit A-1 attached hereto and Exhibit A-2 attached hereto, respectively.

4. Simultaneously with the execution hereof, Landlord and Tenant shall execute, acknowledge and deliver an Amended Notice of

Lease in the form of Exhibit B attached hereto, which Landlord agrees to record with the Registry and file with the Registry District.

5. The Lease, as amended hereby, is hereby ratified and confirmed in all respects.

Executed under seal as of the 2nd day of February, 2000.

LANDLORD:

FORT WASHINGTON REALTY TRUST

/s/ David E. Clem, Trustee

David E. Clem, Trustee
And not individually

FORT WASHINGTON REALTY TRUST

/s/ David M. Roby

David M. Roby, Trustee
And not individually

TENANT:

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Richard H. Aldrich

Name: Richard H. Aldrich
Title: Senior Vice-President, Chief Business Officer

EXHIBIT A-1

Plan Showing Fort Washington Premises
(attached)

[PLAN]

FIFTH AMENDMENT TO LEASE

This FIFTH AMENDMENT TO LEASE (this "Fifth Amendment") is executed 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 (the "Registry") in Book 25422, Page 360 and filed with the Middlesex South Registry District of the Land Court (the "Registry District") as Document No. 976230 (the "Landlord") and Vertex Pharmaceuticals Incorporated (the "Tenant").

Reference is hereby made to that certain 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"), a Second Amendment to Lease (the "Second Amendment"), a Third Amendment to Lease (the "Third Amendment") and a Fourth Amendment to Lease (the "Fourth Amendment"). The lease, First Amendment, Second Amendment, Third Amendment and Fourth Amendment are herein collectively referred to as the "Lease".

WHEREAS, Landlord and Tenant desire to amend and modify the terms of the Lease and to ratify and confirm the terms of the Lease, 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 legal sufficiency of which is hereby acknowledged, Landlord and Tenant agree as follows:

1. Each capitalized term which is used but not defined herein shall have the respective meaning ascribed thereto in the Lease.

2. Effective as of May 1, 1999 (the "Amendment Effective Date"), the definition of Premises set forth in the Lease shall be amended to include the addition of 400 r.s.f. of space on the second floor of the Building (the "Infill Space"), which is more particularly shown as "AREA OF INFILL" on Exhibit A attached hereto and incorporated herein by reference thereto.

3. From and after the Amendment Effective Date, (A) the term "Additional Space," as used in the Lease shall mean (i) the Infill Space and (ii) the Additional Space as defined and described in the Third Amendment, and (B) the terms and conditions of Section 2 of the Second Amendment, as amended by the Third Amendment, shall apply to the Infill Space as if originally included therein as part of the Additional Space.

4. Effective as of the Amendment Effective Date, Section 5 of the Second Amendment, as amended by the Third Amendment, is hereby deleted in its entirety and the following is inserted in place thereof: Commencing on the Amendment Effective Date and continuing throughout the Additional Space Term (as such term is defined in the Third Amendment), Tenant shall pay to Landlord Annual Fixed Rent for the Additional Space in the amount of [**CONFIDENTIAL**], subject to adjustment as set forth in the Lease, including Section 2 and 6 of the Second Amendment. The Annual Fixed Rent for the Additional Space shall be payable in equal monthly installments in advance on the first day of each month and prorated for any portion of a calendar month during the Additional Space Term. In accordance with the foregoing, Tenant shall pay [**CONFIDENTIAL**] to Landlord on the Amendment Effective Date and on the first day of each month thereafter until adjustment of Annual Fixed Rent for the Additional Space as set forth in the Lease.

5. The Lease, as amended hereby, is hereby ratified and confirmed in all respects.

Executed under seal as of the 1st day of May, 1999.

LANDLORD:

FORT WASHINGTON REALTY TRUST

/s/ David E. Clem, Trustee

David E. Clem, Trustee
And not individually

FORT WASHINGTON REALTY TRUST

/s/ David M. Roby

David M. Roby, Trustee
And not individually

TENANT:

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Richard H. Aldrich

Name: Richard H. Aldrich
Title: Senior Vice President

EXHIBIT A

Plan Showing Infill Space
(attached)

[PLAN]

EXHIBIT 10.16

The Company has omitted from this Exhibit portions of the Lease for which the Company has requested confidential treatment from the Securities and Exchange Commission. The portions of the Lease for which confidential treatment has been requested have been deleted and marked with asterisks surrounded by brackets ([****]) and have been filed separately with the Securities and Exchange Commission.

LEASE

by and between

KENDALL SQUARE, LLC

LANDLORD,

and

VERTEX PHARMACEUTICALS INCORPORATED

TENANT
ARTICLE I

REFERENCE DATA

1.1 SUBJECTS REFERRED TO

ANNUAL FIXED RENT RATE:	Subject to Sections 2.3 and 4.1(b) hereof, (i) [*****Confidential*****]/rentable square foot ("r.s.f.") for the Premises or (ii) if Landlord advances the Tenant Allowance, the Annual Fixed Rent Rate set forth above shall be [*****Confidential*****]/r.s.f. for the Premises.
APPROXIMATE TERM:	Approximately 15 years and 4 months, subject to the Options to Extend.
BUILDING:	The Building known as Building A, Cambridge Research Park, Cambridge, Massachusetts, to be constructed by Landlord and containing six levels and an enclosed rooftop mechanical penthouse and approximately 275,000 r.s.f., of which approximately 15,000 r.s.f. shall be ground floor retail space (the "Retail Space").
COMPLEX:	An approximately ten acre parcel of land, including the Lot and all buildings thereon and improvements thereto hereafter constructed by Landlord or by an Affiliate of Landlord (as such term is defined below in this Section 1.1), in Cambridge, Massachusetts, currently owned by Landlord and shown on a plan entitled "Master Plan" dated June 1, 1999, Scale 1"=50', a reduced copy of which is attached as Exhibit A hereto, but excluding any portion of the Complex which is not hereafter owned by Landlord or an Affiliate of Landlord.
INITIAL ESTIMATED ANNUAL ADDITIONAL RENT FOR PREMISES:	[*****Confidential*****] based upon [*****Confidential*****]/r.s.f.
INITIAL ESTIMATED ANNUAL ADDITIONAL RENT FOR COMPLEX:	[*****Confidential*****] based upon [*****Confidential*****]/r.s.f.

LANDLORD:	Kendall Square, LLC, formerly known as Cambridge Research Park, LLC, a Delaware limited liability company.
LANDLORD'S ARCHITECT:	Steven Ehrlich Architects
LANDLORD'S ADDRESS:	c/o Lyme Properties, LLC 101 Main Street Cambridge, Massachusetts 02142
LANDLORD'S CONTRACTOR:	To be determined by Landlord pursuant to Section 3.1.1 hereof.
LANDLORD'S REPRESENTATIVE:	Each of David E. Clem and Robert L. Green
LEASE YEAR:	Each consecutive period of twelve (12) calendar months commencing on the Commencement Date if it occurs on the first day of a calendar month and otherwise commencing on the first day of the month immediately following the month in which the Commencement Date occurs, and each anniversary of such date, except that the first Lease Year shall be approximately one year and four months beginning with the Commencement Date so as to include the four-month period from the Commencement Date through the Rent Commencement Date or until the first day of the following month in the event that the Rent Commencement Date does not occur on the first day of a calendar month.
LOT:	The land on which the Building is to be constructed and shown on Exhibit A as being generally bounded by Athenaeum Street, Kendall Street, Linskey Way and Third Street, the legal description of which (and a plan for which) shall be prepared by Landlord prior to September 1, 2001 and attached hereto as Exhibit A-1 and which plan shall be attached hereto as Exhibit A-2.
MANAGING AGENT:	To be determined by Landlord, provided however, that Tenant may submit to Landlord the names of managing agents

	proposed by Tenant but Landlord shall retain the right to select the Managing Agent.
OPTIONS TO EXTEND:	Two (2) Options to Extend the Term of this Lease for successive periods of ten (10) years each, in accordance with Section 10.12 hereof.
PERMITTED USES:	Technical office for research and development, laboratory and research facility, and, subject to applicable requirements of the Cambridge Zoning Ordinance, limited manufacturing as an accessory use.
PREMISES:	Approximately 260,000 r.s.f. of space in the Building to be constructed by Landlord on the Lot as shown on Exhibit A.
PUBLIC LIABILITY INSURANCE LIMITS:	Bodily injury: $10,000,000 Property Damage: $10,000,000
RENTABLE SQUARE FOOTAGE OF BUILDING:	As determined pursuant to Section 2.3 hereof, but the Building is currently estimated to consist of 275,000 r.s.f. of space.
RENTABLE SQUARE FOOTAGE OF PREMISES:	As determined pursuant to Section 2.3 hereof, but the Premises is currently estimated to consist of approximately 260,000 r.s.f. of space in the Building to be constructed by Landlord on the Lot.
SCHEDULED SUBSTANTIAL COMPLETION DATE:	May 1, 2002
SCHEDULED RENT COMMENCEMENT DATE:	September 1, 2002
SCHEDULED TERM COMMENCEMENT DATE:	May 1, 2002
SECURITY DEPOSIT:	As further described in Section 10.11 hereof, a letter of credit or cash in the initial amount of [*****Confidential*****] plus an amount equal to

	the Initial Estimated Annual Additional Rent for Premises [*****Confidential*****] and an amount equal to the Initial Estimated Annual Additional Rent for Complex [*****Confidential*****], subject to adjustment in accordance with Sections 2.3 and 10.11 hereof.
TENANT:	Vertex Pharmaceuticals Incorporated
TENANT'S ADDRESS (For Notice and Billing):	130 Waverly Street Cambridge, Massachusetts 02139-4242
TENANT ALLOWANCE:	Subject to Section 2.3 hereof, [*** Confidential***]
TENANT'S ARCHITECT:	Tsoi/Kobus & Associates, Inc.
TENANT'S PROPORTIONATE FRACTION FOR BUILDING:	Subject to Section 2.3 hereof, 94.55%
TENANT'S PROPORTIONATE FRACTION FOR COMPLEX:	As determined pursuant to Section 2.3 hereof.
TENANT'S REPRESENTATIVE:	Alfred Vaz, Jr.
TERM COMMENCEMENT DATE:	The earlier of (a) the date that is four (4) months after the Substantial Completion Date or (b) the date on which Tenant's personnel occupy all or any portion of the Premises for the conduct of any aspect of Tenant's business (as opposed to the conduct by Tenant of any of Tenant's Work or the installation in the Premises of fixtures, furnishings, equipment or personal property).
TERM EXPIRATION DATE:	The last day of the fifteenth Lease Year, subject to two (2) Options to Extend for successive periods of ten (10) years each, in accordance with Section 10.12.

The foregoing and following capitalized terms shall have the respective meanings set forth above, below or as referenced in this Lease, as applicable:

ADA Requirements: The Americans with Disabilities Act (42 U.S.C.ss. 12101 et seq.) and the regulations and Accessibility Guidelines for Buildings and Facilities issued pursuant thereto.

Additional Rent Adjustment Date: As defined in Section 4.2.4

Additional Rent: All rent, charges and other sums, other than Fixed Rent, due Landlord pursuant to this Lease.

Affiliate of Landlord: A person or entity controlled by, controlling or under common control with Landlord.

Affiliate of Tenant: Any entity controlled by, controlling or under common control with Tenant.

Annual Building Maintenance and Operation Charge: As defined in Section 4.2.4

Annual Complex Maintenance and Operation Charge: As defined in Section 4.2.4.

Annual Maintenance Charge: The sum of the Annual Building Maintenance and Operation Charge, the Annual Complex Maintenance and Operation Charge and the Nonstandard Charge.

Annual Tax, Insurance and Utility Charge: The sum of the Initial Tax Charge, the Initial Insurance Charge and the Initial Utility Charge.

Base Building Improvements: As defined in Section 3.1.1.

Broker: Insignia/ESG, Inc.

Building Common Areas: Interior and exterior common areas and facilities of the Building and the Lot, including walkways and sidewalks necessary for access to the Building, entrances, lobbies, stairs, elevators and corridors, if any, designated by Landlord for access to the Premises, loading docks in the Building, and heating, ventilating, air conditioning, plumbing, electrical and other mechanical systems and equipment serving the Premises in common with other portions of the Building, all of which shall be shown on a plan prepared by Landlord and delivered to Tenant on or before the date upon which the building permit for the Base Building Improvements is issued.

Casualty Restoration Completion Date: As defined in Section 6.1.

CDD: Community Development Department of the City of Cambridge, Massachusetts.

Change Order: As defined in Section 3.1.2.

Chapter 91 Determination: As defined in Section 3.1.4.

Commencement Date: As defined and determined pursuant to Section 2.2.

Complex Common Areas: Interior and exterior common areas and facilities of the Complex to which Tenant has access in common with other tenants of buildings in the Complex, including streets, parks, open space, walkways and sidewalks necessary for access to the Lot and heating, ventilating, air conditioning, plumbing, electrical and other mechanical systems and equipment serving common areas of the Complex. The exterior Complex Common Areas shall be in the approximate locations of Open Space 1, Open Space 2, Open Space 3, Kendall Street, Kendall

Street West, Kendall Street East and Athenaeum Street Extension, all as shown on a plan entitled Kendall Square, Parcel Worksheet 7 in Cambridge, Massachusetts, dated 15 November 2000 prepared by Gunther Engineering, Inc., a copy of which has been delivered to Tenant.

Confidential Information: Any and all knowledge, information, data, materials, trade secrets, and other work product of a confidential nature gained, obtained, derived, produced, generated or otherwise acquired by Landlord with respect to Tenant's business.

Construction Documents: As defined in Section 3.2.1.

Design Development Documents: As defined in Section 3.1.1.

Development Approvals: As defined in Section 3.1.4.

Environmental Agreement: The Environmental Agreement between Landlord and Tenant in the form of Exhibit F hereto.

Environmental Remediation: As defined in Section 3.1.3.

Estimated Annual Additional Rent: Landlord's estimate of the total amount of Additional Rent which may be due from Tenant for any

particular Lease Year with respect to the Building, Lot and Complex.

Estimated Annual Maintenance Charge: Landlord's reasonable estimate of the Annual Maintenance Charge.

Estimated Annual Tax, Insurance and Utility Charge: Landlord's reasonable estimate of the Annual Tax, Insurance and Utility Charge.

Event of Default: As defined in Section 7.1.

Excluded Taxes: Any income taxes, excess profits taxes, excise taxes, franchise taxes, or any taxes or assessments with respect to the Garage and other buildings leased or available for lease (and the parcels of land upon which such buildings are situated), other than the Building, the Lot and any building or portion of a building in the Complex which is not available for lease (and the parcel(s) of land on which the same may be located), in the Complex.

Exercise Notice: As defined in Section 10.12.

Extension Periods: As defined in Section 10.12.

Extension Rent: As defined in Section 10.12.

Fair Market Rent: As defined in Section 10.12.

Final Design Documents: As defined in Section 3.1.1.

Fixed Rent: As defined in Section 4.1.

Force Majeure Events: As defined in Section 3.2.

Garage Owner: The owner of the Garage.

Garage Parking Spaces: Tenant's Parking Spaces.

Garage Security Services: As defined in Section 10.14.

Garage: As defined in Section 10.14.

Holder: As defined in Section 8.1.

Impositions: As defined in Section 4.2.4(1)(a).

Indemnified Parties: As defined in Section 5.1.6.

Initial Estimated Annual Additional Rent for Building: As defined in Section 4.2.

Inquiry Notice: As defined in Section 10.12.

Landlord's Statement: As defined in Section 4.2.4.

Landlord's Work: The construction of the Base Building Improvements in accordance with the Final Design Documents as affected by Change Orders.

MCP: Massachusetts Contingency Plan, 310 CMR 40.0000 et seq., as amended.

MEPA Certificate: Certificate of the Secretary of Environmental Affairs on the Final Environmental Impact Report dated April 15, 1999.

Minor Alteration: As defined in Section 3.2.1.

Mortgage: Mortgages, deeds of trust or other similar instruments evidencing other voluntary liens or encumbrances, and modifications,

consolidations, extensions, renewals, replacements and substitutes thereof.

Nonstandard Charge: As defined in Section 4.2.4.

Nonstandard Costs: As defined in Section 4.2.4.

Options to Extend: As defined in Section 10.12.

Order of Conditions: Order of Conditions issued July 12, 1999 by the City of Cambridge Conservation Commission.

Outside Completion Date: As defined in Section 3.2.

Parking Fee: As defined in Section 10.14.

Preliminary Design Concept: As defined in Section 3.1.1.

Progress Schedule: As set forth in Exhibit B-1 hereto.

PTDM Approval: The PTDM Decision, the PTDM Letter and PTDM Plan.

PTDM Decision: PTDM Ordinance Final Decision issued April 20, 1999 by the CDD.

PTDM Letter: The Letter dated April 20, 1999 to Robert L. Green of Lyme Properties from Susanne Rasmussen of the CDD attached to the PTDM Decision.

PTDM Plan: Landlord's Parking Transportation Demand Management Plan dated April 9, 1999.

PUD Approval: The PUD Permit and the Settlement Agreement.

PUD Permit: A Special Permit issued by the City of Cambridge Planning Board, Case No. PB #141 filed April 7, 1999 (the "PUD Permit"), recorded with the Middlesex South District Registry of Deeds (the "Registry") in Book 31137, Page 89.

Punch List Items: Minor items which can be fully completed by Landlord within thirty (30) days without material interference with Tenant and other items which because of the season or weather or the nature of the item are not practicable to do at the time, provided that none of said items is necessary to perform Tenant's Work.

Remediation Documents: The documents set forth on Exhibit F-1 hereto.

Rentable Square Feet, Rentable Square Footage or r.s.f.: The rentable square footage of the space in question as measured in accordance with the standard set forth in Section 2.3.

Response Action Outcome: As such term is defined in the MCP.

Schematic Design Documents: As defined in Section 3.1.1.

Settlement Agreement: A Settlement Agreement dated May 24, 1999 among Barbara Broussard, Mary DeFreitas, the East Cambridge Planning Team and Landlord.

SNDA: Subordination, Non-disturbance and Attornment Agreement.

Subdivision: As defined in Section 9.1.6.

Sublease Costs: As defined in Section 5.2.1.

Sublease Profits: As defined in Section 5.2.1.

Subsequent Approvals: As defined in Section 3.1.4.

Substantial Completion Date: As defined in Section 3.2.

Substitute Taxes: As defined in Section 4.2.1.

Tenant Allowance Notice: As defined in Section 2.3.

Tenant Delay: As defined in Section 3.2.

Tenant's Property: All of the furnishings, fixtures, equipment, effects and property of every kind, nature and description owned or leased by Tenant or by any person claiming by, through or under Tenant which, during the continuance of this Lease or any occupancy of the Premises by Tenant or anyone claiming under Tenant, may be on the Premises.

Tenant's Proportionate Fraction for Building: As defined in Section 2.3

Tenant's Proportionate Fraction for Complex: As defined in Section 2.3.

Tenant's Work: As defined in Section 3.2.1.

Title Exceptions: Item Nos. 2 through 12, inclusive set forth in Schedule B, Part 1 of the Title Policy.

Title Policy: Owner's Policy No. 136-00-336684 dated August 19, 1998, issued by Lawyer's Title Insurance Corporation.

TMA: The Charles River Transportation Management Association or any other transportation management association of which Landlord is a member.

Transfer: As defined in Section 9.1.6.

Utilities: As defined in Section 4.2.3.

Utility Service Provider or Utility Service Providers: As defined in Section 4.2.3.

Utility Services: As defined in Section 4.2.3.

1.2 EXHIBITS.

The Exhibits listed below in this section are incorporated in this Lease by reference and are to be construed as a part of this Lease:

EXHIBIT A	Plan showing Complex
EXHIBIT A-1	Legal Description
EXHIBIT A-2	Plan showing Lot
EXHIBIT A-3	Confirmation of Commencement Date and Rentable Square Footage
EXHIBIT B	Base Building Description
EXHIBIT B-1	Progress Schedule
EXHIBIT C	Rules and Regulations
EXHIBIT D	SNDA Form
EXHIBIT E	Schedule of Equipment to be Removed by Tenant
EXHIBIT F	Environmental Agreement
EXHIBIT F-1	Remediation Documents

1.3 TABLE OF CONTENTS

ARTICLE II

PREMISES AND TERM

2.1 PREMISES.

Landlord hereby leases and demises to Tenant and Tenant hereby leases from Landlord, subject to and with the benefit of the terms, covenants, conditions and provisions of this Lease, the Premises. Tenant shall have, as appurtenant to the Premises, the right to use in common with others, if any, entitled thereto
(i) Building Common Areas and Complex Common Areas, (ii) the building service fixtures and equipment serving the Premises, and (iii) subject to Section 10.14 hereof, the right to use that number of nonreserved parking spaces determined by multiplying the Rentable Square Footage of Premises by .0015 ("Tenant's Parking Spaces") in the Garage. If the loading dock serving the Building is located in the Premises, the tenants of the Retail Space shall have the right to use such loading dock in accordance with reasonable rules and regulations to be mutually agreed upon by Landlord and Tenant. Tenant shall have no right to approve tenants for the Retail Space but Landlord represents that the retail uses of the Retail Space shall be consistent with first-class mixed use projects in the Boston/Cambridge, Massachusetts market.

Landlord reserves the right from time to time, without unreasonable interference with Tenant's use, (a) to install, repair, replace, use, maintain and relocate for service to the Premises and to other parts of the Building, or either, building service fixtures and equipment wherever located in the Building, including the perimeter walls of the Premises, on the roof of the Building, in mechanical penthouses and in any space in or adjacent to the Premises used for shafts, stacks, pipes, conduits, wires and appurtenant fixtures, ducts, electric or other utilities, telecommunications equipment or other Building facilities, as well as the right of access (which right of access shall be at reasonable times and upon reasonable notice, except in the case of emergency) through the Premises for the purpose of operation, maintenance and repair, provided, however, that the Annual Fixed Rent, Additional Rent (as defined in Section 4.2 hereof) and other charges payable hereunder by Tenant shall be proportionately reduced in the event that any such installation or relocation of service materially reduces the usable floor area of the Premises (other than a temporary reduction to accommodate installation, repair, replacement, maintenance and relocation of such service); notwithstanding the foregoing provisions of this clause (a), to the extent that the Premises include all of the rentable square footage on a particular floor of the Building, Landlord's right to install, repair, replace, use, maintain and relocate such building service fixtures and equipment on such floor of the Building shall be limited to placing or installing such building service fixtures and equipment in shafts, pipes, stacks, conduits, chases and risers located within the central core common area of such floor or in such other locations on such floor as may be set forth in the Final Design Documents; or (b) to construct, alter or relocate any Building Common Areas and/or Complex Common Areas, provided however, that any such construction, alteration or relocation (1) shall be in compliance with applicable zoning laws, the Development Approvals or Subsequent Approvals, (2) shall be substantially equivalent or substantially similar to common areas of first-class, mixed use projects in Boston or Cambridge, Massachusetts and (3) shall not reduce the number of Tenant's Parking Spaces.

2.2 TERM.

To have and to hold for a period (the "Term") commencing on the date which is the later of the Scheduled Term Commencement Date or the Substantial Completion Date (whichever of said dates is appropriate being referred to herein as the "Commencement Date" or the "Term Commencement Date"), and continuing until the Term Expiration Date, unless sooner terminated as provided in Section 3.2 or in Article VII, and subject to extension in accordance with the terms of
Section 10.12 hereof. As used herein the term "Rent Commencement Date" shall mean that date which is four (4) calendar months after the Commencement Date. Tenant shall have the right to access the Premises prior to the Commencement Date for purposes of installing equipment and furnishings and performing Tenant's Work (as hereinafter defined) in accordance with and subject to the provisions of Section 3.2.

2.3 MODIFICATION OF CERTAIN DEFINITIONS; CERTIFICATE REGARDING COMMENCEMENT DATE.

Landlord and Tenant acknowledge that the actual rentable square footage of the Premises and the Building may, upon completion of construction of the Base Building Improvements (as hereinafter defined), be different than the estimates set forth in Article I hereof. Accordingly, after completion of construction of the Base Building Improvements, Landlord will notify Tenant of the actual Rentable Square Footage of Premises and the Rentable Square Footage of Building, which shall be measured in accordance with the ANSI/BOMA 265.1-1996 Standard Method for Measuring Building Rentable Area, approved June 7, 1996, for a single tenant building. Landlord's Architect's measurements shall be subject to verification by Tenant's Architect for conformity to the foregoing standard. If necessary, Landlord and Tenant will execute an amendment to this Lease modifying the definitions of Rentable Square Footage of Premises, Rentable Square Footage of Building, Tenant's Proportionate Fraction for Building, Tenant's Proportionate Fraction for Complex, Initial Estimated Annual Additional Rent for Premises, Initial Estimated Annual Additional Rent for Complex, the amount of the Security Deposit (as specified in Section 10.11) and the Tenant Allowance if Tenant has elected to have Landlord advance the Tenant Allowance as hereinafter set forth, and such other terms and provisions, if any, of this Lease as may be necessary to reflect such actual measurements. Tenant shall have a period of forty-five (45) days after the date hereof within which to notify Landlord in writing whether Tenant intends to have Landlord advance the Tenant Allowance (the "Tenant Allowance Notice"). In the

absence of a Tenant Allowance Notice by such date, Tenant shall be deemed to have elected not to have Landlord advance the Tenant Allowance, in which event the last paragraph of Section 3.2.1 hereof shall be of no force or effect. If Tenant elects to have Landlord advance the Tenant Allowance, Landlord and Tenant shall execute an amendment to this Lease evidencing such election, acknowledging an increase in the amount of the Security Deposit (as specified in Section 10.11), and amending such other terms and provisions, if any, of this Lease as may be necessary to reflect such election. Landlord and Tenant will also execute, upon request of either, a certificate, substantially in the form of Exhibit A-3 hereto, acknowledging the Commencement Date of this Lease as provided for in Section 2.2 hereof, after such Commencement Date has occurred (as described in Section 3.2 hereof). Anything in this Lease to the contrary notwithstanding, the Premises shall include all of the Rentable Square Footage in the Building other than the Retail Space. "Tenant's Proportionate Fraction for

Building" shall be the ratio, expressed as a percentage, of the Rentable Square Footage of Premises to the Rentable Square Footage of Building. "Tenant's Proportionate Fraction for Complex" shall be the ratio, expressed as a percentage, of the Rentable Square Footage of Premises to the Rentable Square Footage of all buildings (other than any garages in the Complex and any building or portion thereof which is not available for lease such as an information kiosk), including the Building, which Landlord is permitted to develop in the Complex pursuant to the PUD Approval. Landlord shall have the right to estimate on a good faith basis, from time to time, the Rentable Square Footage of all such buildings prior to the construction thereof. From time to time after construction of each building in the Complex, Landlord shall notify Tenant of the Rentable Square Footage of such buildings and shall provide to Tenant, upon Tenant's request, such information as Tenant may reasonably request with respect to the calculation thereof. Within thirty (30) days after notice of such Rentable Square Footage, Tenant shall pay to Landlord or Landlord shall credit to Additional Rent next due from Tenant, as applicable, any underpayment owed or overpayment made, as applicable, by Tenant based upon the estimated Rentable Square Footage of such buildings, on account of Tenant's Proportionate Fraction for Complex of taxes and assessments and Tenant's Proportionate Fraction for Complex of the Annual Complex Maintenance and Operation Charge and the actual Rentable Square Footage of such buildings.

ARTICLE III

IMPROVEMENTS

3.1 INITIAL CONSTRUCTION.

3.1.1 Development of Plans. Landlord has developed and Tenant hereby approves the detailed base building description (the "Preliminary Design Concept") set forth or referenced in Exhibit B hereto for the Building and Premises describing in general terms the principal items of work and materials to be performed and supplied by Landlord. Attached hereto as Exhibit B-1 is a schedule (the "Progress Schedule") setting forth items and completion dates for various aspects of the development and construction of the Building. Landlord and Tenant agree to cooperate and use reasonable efforts to complete the items in the Progress Schedule by the respective completion dates so that the Substantial Completion Date occurs on or before the Scheduled Substantial Completion Date. In connection therewith, Landlord shall cause Landlord's Architect to prepare schematic architectural plans, structural and engineering plans, elevations and building sections, and site plans for the Building based upon the Preliminary Design Concept ("Schematic Design Documents"), which shall mean a conceptual design of the Base Building Improvements illustrating the scale and relationship of the components of the Base Building Improvements. The Schematic Design Documents shall show walkways and plazas for the Building and Lot, major landscape features, hardscaping, scale and relationship of other major components of the Building and Lot, pedestrian and vehicular (including service) access and flow through the Lot, lighting, survey information such as existing elevations, benchmarks and utilities, and any known construction limits. The Schematic Design Documents shall also include models, color renderings and outline specifications indicating all basic materials and systems of the proposed Base Building Improvements. The Schematic Design Documents and

all subsequent Design Documents shall be prepared and distributed by Landlord's Architect in both hard copy and electronic format.

During the development of the Schematic Design Documents, Landlord and Tenant shall meet with representatives of the CDD (as defined in Section 3.1.4 hereof) and their respective consultants to review and refine the design of the Building and the Lot. Thereafter, Landlord shall seek approval of the Schematic Design Documents by the Planning Board (as defined in Section 3.1.4 hereof), and Tenant shall cooperate with Landlord in connection therewith. If despite the good faith efforts of Landlord and Tenant the Planning Board rejects the design reflected in the Schematic Design Documents or insists upon major changes to the Schematic Design Documents which are unacceptable to Landlord due to anticipated material increases in the cost of Landlord's Work or a material delay in the commencement or completion of Landlord's Work and if as a result thereof Landlord is unable to obtain approval of the Schematic Design Documents by the Planning Board by the date set forth in the Progress Schedule, as the same may be changed by any Tenant Delay, Landlord may terminate this Lease upon thirty

(30) days prior written notice unless within such thirty-day period Tenant agrees to pay to Landlord the increases in the cost of Landlord's Work resulting from such changes and delays. If Tenant does not agree within such thirty-day period to pay to Landlord the increases in the cost of Landlord's Work resulting from such changes and delays and Planning Board approval of the Schematic Design Documents is not obtained by the end of such thirty-day period, this Lease shall thereupon terminate. Planning Board approval of the Schematic Design Documents shall be a Subsequent Approval (as defined in Section 3.1.4 hereof). Landlord and Tenant agree to cooperate in connection with any conditions imposed by the Planning Board in connection with the Planning Board's approval of the Schematic Design Documents, such as further review of the Design Documents by the CDD.

At such time as the Schematic Design Documents have been approved by Landlord and by the Planning Board, Landlord shall cause Landlord's Architect to prepare further details and development of the Schematic Design Documents (the "Design Development Documents") for the Building and the Base Building Improvements, which shall mean plans, sections and elevations, typical construction details, and equipment layouts showing the scope, relationships, forms, size and appearance of the Base Building Improvements. Design Development Documents shall include architectural, mechanical and electrical drawings and details of the Building, exterior materials to be incorporated in the Building, walkways and other plaza areas on the Lot, a site and landscape plan for the Lot showing all site development and landscape detail for lighting, paving, landscaping, utilities, grading, drainage, access and service areas. The Design Development Documents shall also include outline specifications indicating all basic materials and mechanical and electrical systems of the proposed Base Building Improvements. As with the Schematic Development Documents, the Design Development Documents shall be prepared and distributed in both hard copy and electronic format.

At such time as the Design Development Documents have been approved by Landlord, Landlord shall cause Landlord's Architect to prepare detailed construction drawings and specifications ("Final Design Documents") which shall set forth in detail the requirements for construction of Landlord's Work (including all architectural, mechanical, electrical and structural drawings and detailed specifications), shall be fully coordinated with one another and with field conditions as they exist on the Lot, and shall show all work necessary to complete Landlord's

Work, including all cutting, fitting, and patching and all connections to the mechanical and electrical systems and components of the Base Building Improvements. The Final Design Documents shall be used for the construction of the Base Building Improvements and shall be based upon the Design Development Documents and other information which is relevant to the design and construction of the Base Building Improvements. The Final Design Documents shall be prepared and stamped by Landlord's Architect. The Preliminary Design Concept, the Schematic Design Documents and the Final Design Documents (collectively, the "Design Documents") shall not include any of Tenant's Work (as hereinafter defined). As used herein, the term "Base Building Improvements" shall mean the items of work and materials to be performed and supplied by Landlord in accordance with the Final Design Documents as affected by Change Orders (as such term is hereafter defined) and the term "Landlord's Work" shall mean the construction of the Base Building Improvements in accordance with the Final Design Documents as affected by Change Orders. Prior to the solicitation of bids by Landlord from general contractors for the performance of Landlord's Work, Tenant may submit the names of general contractors to be included on the list of such bidders, but Landlord shall retain the right to select Landlord's Contractor.

The preliminary and final Schematic Design Documents, the preliminary and final Design Development Documents, and the Final Design Documents shall be submitted to both Landlord and Tenant for review and comment. In each instance Tenant shall have five business days to review each submission and to notify Landlord of any objections. Tenant may object to any new items shown on a submission which are not in compliance with (i) the Preliminary Design Concept with regard to the Schematic Design Documents, (ii) the Schematic Design Documents with regard to the Design Development Documents, or (iii) the Design Development Documents with regard to the Final Design Documents, specifying and detailing in each case such objections. To the extent that any such submission is consistent with prior submissions approved by Tenant, Tenant shall have no right to object thereto, but Tenant may nonetheless offer comments thereon, which comments Landlord agrees to consider if the implementation thereof will not increase the cost of Landlord's Work or delay the commencement or completion thereof, provided that if Tenant agrees to pay Landlord for increases in such cost of Landlord's Work and the cost of any such delays, Landlord agrees that Landlord will not unreasonably refuse to implement such comments. If Tenant objects to any such submission because such submission is inconsistent with the prior submission approved by Tenant, Landlord shall cause Landlord's Architect to modify such submission to respond to Tenant's objection and submit such modified submission to Tenant within five (5) business days after receipt of Tenant's objections for review by Tenant in the same manner as with regard to the prior submission. Landlord and Tenant agree to cooperate with one another diligently and in good faith to complete the review of all Design Document submissions and to resolve any objections of Tenant with respect to such submissions. Tenant's Architect, on behalf of Tenant, may participate in the review of all Design Document submissions and in the resolution of any objections of Tenant with respect to such submissions. Tenant acknowledges that a number of additional licenses, permits and approvals may be required in order for Landlord to commence and complete construction of the Base Building Improvements and Tenant agrees to cooperate with Landlord in obtaining the same.

3.1.2 Change Orders. As used herein, the term "Change Order" shall mean (A) a written order from Landlord which Landlord

determines is necessary to carry out the approved

design and construction of the Base Building Improvements, whether due to any mistake or omission in, or clarification of, the Design Documents, or (B) a written order to Landlord from Tenant requesting or authorizing a Change in Landlord's Work or an adjustment of the Progress Schedule. If Tenant requests any change order for the Base Building Improvements, Landlord shall submit all such Change Orders with plans, specifications, pricing and a schedule of values if appropriate to Tenant for its review and approval. No Change Order for a change in the Base Building Improvements requested by Tenant shall be effective unless approved by Landlord's Representative and Tenant's Representative in writing, such approval not to be unreasonably withheld or delayed. Tenant shall pay an amount equal to all costs directly incurred by Landlord as a result of any Change Orders signed by Tenant and Landlord affecting Landlord's Work or the Base Building Improvements, including the cost to Landlord of Landlord's Contractor's overhead and profit equal to 10% of those costs exclusive of overhead and profit. Amounts due and payable on account of such Change Orders shall be paid within fifteen (15) days of billing therefor, and in all events by the Substantial Completion Date. If, however, Tenant has elected to have Landlord advance the Tenant Allowance, amounts due and payable by Tenant on account of such Change Orders may be applied to the extent of the unadvanced balance, if any, of the Tenant Allowance. After completion of the Base Building Improvements, Landlord shall deliver a set of as built plans for the Base Building Improvements to Tenant upon Landlord's receipt thereof. Landlord agrees to provide Tenant with copies of all Change Orders for the Base Building Improvements from Landlord. Tenant shall have five (5) business days after the receipt thereof to review and approve or disapprove of any such Change Orders. Tenant may disapprove a Change Order from Landlord only if such Change Order would materially and adversely affect Base Building Improvements. If Tenant does not notify Landlord of Tenant's disapproval within such five-business day period, Tenant shall be deemed to have approved such Change Order.

3.1.3 Environmental Remediation.

Landlord shall be responsible for undertaking and completing environmental remediation of the Lot ("Environmental Remediation") pursuant to an Environmental Agreement (the "Environmental Agreement") between Landlord and Tenant in the form of Exhibit F hereto. Landlord has delivered to Tenant the documents set forth on Exhibit F-1 hereto (the "Remediation Documents") and Landlord will provide Tenant with such additional information pertaining to Environmental Remediation and hazardous substances present on other portions of the Lot as Tenant reasonably may request, including correspondence with regulatory authorities and other governmental bodies with respect to the Environmental Remediation.

3.1.4 Development Approvals and Title Exceptions.

Reference is hereby made to (i) a Special Permit issued by the City of Cambridge Planning Board (the "Planning Board"), Case No. PB #141 filed April 7, 1999 (the "PUD Permit"), recorded with the Middlesex South District Registry of Deeds (the "Registry") in Book 31137, Page 89 as affected by a Settlement Agreement dated May 24, 1999 among Barbara Broussard, Mary DeFreitas, the East Cambridge Planning Team and Landlord (the "Settlement Agreement") (the PUD Permit and the Settlement Agreement are herein collectively referred to herein as the "PUD Approval"), (ii) PTDM Ordinance Final Decision issued April 20, 1999 by the Community Development Department ("CDD") of the City of Cambridge (the "PTDM Decision"), the Letter dated April 20, 1999 to Robert L. Green of Lyme Properties from Susanne

Rasmussen of the CDD (the "PTDM Letter") attached to the PTDM Decision, and Landlord's Parking Transportation Demand Management Plan dated April 9, 1999 (the "PTDM Plan") (the PTDM Decision, the PTDM Letter and PTDM Plan are collectively referred to herein as the "PTDM Approval"), (iii) a Certificate of the Secretary of Environmental Affairs on the Final Environmental Impact Report dated April 15, 1999 (the "MEPA Certificate"), (iv) an Order of Conditions issued July 12, 1999 by the City of Cambridge Conservation Commission (the "Order of Conditions") and (v) a Determination for Issuance of a Waterways License Amendment dated December 8, 1999, issued by the Executive Office of Environmental Affairs of the Commonwealth of Massachusetts (the "Chapter 91 Determination"), (collectively, the "Development Approvals"). Reference is also hereby made to Item Nos. 2 through 12, inclusive (the "Title Exceptions") set forth in Schedule B, Part 1 of Owner's Policy No. 136-00-336684 dated August 19, 1998, issued by Lawyer's Title Insurance Corporation (the "Title Policy"). Tenant acknowledges that Landlord has delivered to Tenant copies of the Development Approvals, the Title Exceptions and the Title Policy. This Lease, and the development, construction and operation of the Building, the Lot and the Complex, shall be subject to the Development Approvals, the license to be issued pursuant to the Chapter 91 Determination, the Title Exceptions and all other determinations, approvals, decisions and actions of governmental authorities having jurisdiction of the Complex hereafter issued pursuant to or contemplated by the Development Approvals and delivered to Tenant ("Subsequent Approvals"). Each of Landlord and Tenant, in the exercise of their respective rights and the performance of their respective obligations pursuant to this Lease, shall observe and comply with all requirements of the Development Approvals and Subsequent Approvals.

Without limiting the generality of the foregoing, to the extent required for compliance with the PUD Permit and the PTDM Approval, as the same may be affected by Subsequent Approvals (but only for so long as the same remain in force and effect from time to time), Tenant shall comply with the following: (a) Tenant shall comply with the obligations of the PTDM Approval applicable to tenants, employers and/or employees in the Complex, (b) Tenant shall cooperate with Landlord in the implementation of the Additional Recommendations set forth in the PTDM Letter if the mode split goal of the PTDM Approval is not achieved,
(c) Tenant shall cooperate with Landlord and/or the Charles River Transportation Management Association or any other transportation management association of which Landlord is a member (a "TMA") in implementing the PTDM Approval and TMA programs (and Tenant is hereby encouraged to participate in all TMA programs),
(d) Tenant shall establish a guaranteed ride home program for Tenant's employees as provided in the PUD Approval and the PTDM Approval, as the same may be affected by Subsequent Approvals, (e) Tenant shall, either directly or through a program established by Landlord or a TMA for tenants of the Complex, complete surveys pursuant to Section III D of the PTDM Plan, (f) as required by the PUD Approval and PTDM Approval, as the same may be affected by Subsequent Approvals, Tenant shall contract with the MBTA and subsidize transit passes and commuter rail passes in an amount not less than 60% of the cost thereof or such higher percentage as Landlord may require if mode split commitments are not achieved,
(g) as provided in the PTDM Approval, as the same may be affected by Subsequent Approvals, Tenant shall cooperate with Landlord in connection with surveys concerning attitudes of employees and customers of Tenant in order to refine and develop transportation demand management programs, (h) Tenant shall provide Tenant's employees with information provided to Tenant by or on behalf of Landlord pursuant to the PTDM Plan, including information on the advantages and benefits of telecommuting, flexible time, compressed work week programs, the

materials to be provided pursuant to Section VII A of the PTDM Plan and other programs recommended by the City of Cambridge, (i) as provided in the PTDM Approval, as the same may be affected by Subsequent Approvals, Tenant is hereby encouraged to use a commuter choice program which allows qualifying employees the option of receiving the cash value of a Tenant's Parking Space, (j) Tenant shall participate in and pay a reasonable share (which shall not be less than Tenant's Proportionate Fraction for Complex) of the cost of any TMA shuttle bus service serving the Complex, as contemplated by the PTDM Approvals, and (k) Tenant shall cooperate with Landlord with respect to all other aspects of the PTDM Approval.

3.2 PREPARATION OF PREMISES FOR PERFORMANCE OF TENANT'S WORK.

Landlord agrees to use reasonable efforts to have the Premises ready for the performance of Tenant's Work on or before the Scheduled Substantial Completion Date which shall, however, be extended for a period equal to that of (a) any delays due to Acts of God, or by labor disputes, fire, unusual delays in deliveries, unavoidable casualties or other causes beyond Landlord's reasonable control (collectively, "Force Majeure Events") and (b) any delays due to (i) any changes in any of the Design Documents (other than the Preliminary Design Concept or any objections of Tenant to a submission of Design Documents because of inconsistencies with the prior submission of Design Documents) requested by Tenant and approved by Landlord or any changes in the Base Building Improvements requested by Tenant and approved by Landlord, (ii) any act or neglect of Tenant, or of any employee, agent, or separate contractor of Tenant, (iii) the concurrent performance of the Base Building Improvements and Tenant's Work, (iv) Tenant's failure to respond to any request by Landlord for information or approval within five (5) business days of Landlord's request, or (v) any breach or default by Tenant in the performance of Tenant's obligations pursuant to this Lease, even if such breach or default is cured (collectively, "Tenant Delay"). The Premises shall be deemed ready for the performance of Tenant's Work on the Substantial Completion Date (as hereinafter defined). As used herein, the term "Substantial Completion Date" shall mean and refer to the date on which: (i) the Base Building Improvements are substantially complete as certified by Landlord's Architect and verified by Tenant's Architect, with the exception of minor items which can be fully completed by Landlord within thirty (30) days without material interference with Tenant and other items which because of the season or weather or the nature of the item are not practicable to do at the time, provided that none of said items is necessary to perform Tenant's Work (collectively "Punch List Items"), (ii) if Tenant's Work has not then commenced, a Certificate of Occupancy from the City of Cambridge (or a Temporary Certificate of Occupancy with conditions which can be satisfied without material interference with the performance of Tenant's Work) shall have been obtained, (iii) the Premises is broom clean and free of debris except to the extent, if any, resulting from Tenant's Work, and (iv) all utilities required for the use of the Premises have been brought by Landlord to the Utility Switching Points (as defined in Section 4.2.3 hereof); provided, however, that if the Substantial Completion Date does not occur on or before the Scheduled Substantial Completion Date due to any Tenant Delay then the Base Building Improvements shall be deemed to be substantially completed, and the Substantial Completion Date shall be deemed to have occurred, on the date on which the Substantial Completion Date would have occurred taking into account any Force Majeure Events but without taking into account any Tenant Delay. If Landlord's Architect has certified that the Base Building Improvements are substantially complete but Tenant's Architect does not verify the same within five (5) business days thereafter, Landlord's Architect and Tenant's Architect shall immediately select a third

independent architect who shall conclusively determine whether the Base Building Improvements are substantially complete. Landlord

and Tenant shall share equally the costs of such third architect. Landlord's obligations under Sections 3.1 and 3.2 shall be deemed to have been performed on the Substantial Completion Date except for Punch List Items and items which do not conform with the requirements of Sections 3.1 and 3.2 and as to which Tenant or Tenant's Architect shall have given written notice to Landlord prior to such date. If Tenant or Tenant's Architect does not provide such written notice prior to the Substantial Completion Date, a certificate of substantial completion by a licensed architect or registered engineer shall be conclusive evidence that Landlord has performed all such obligations except for Punch List Items and items stated in such certificate to be incomplete or not in conformity with such requirements.

Notwithstanding the foregoing, Tenant shall have the right to terminate this Lease upon notice given to Landlord on or before the date which is 180 days after the Scheduled Substantial Completion Date in the event that the Substantial Completion Date, as extended due to the occurrence of any Tenant Delay, has not occurred on or before the date which is 180 days after the Scheduled Substantial Completion Date, as so extended for Tenant Delay (as so determined, the "Outside Completion Date").

3.2.1. Performance of Tenant's Work.

Except for the Base Building Improvements to be performed by Landlord in accordance with the Final Design Documents as affected by Change Orders, all of Tenant's initial interior improvements, fixtures, finishes, furnishings, furniture, telephones, movable equipment and signs visible from the exterior of the Building (collectively, "Tenant's Work"), shall be performed at the sole cost and expense of Tenant, provided however, that subject to this Section 3.2.1 Landlord shall advance up to the amount of the Tenant Allowance if Tenant elects to have Landlord advance the Tenant Allowance. Tenant's Representative shall serve as construction manager for Tenant's Work. Tenant's performance of Tenant's Work shall be coordinated with any work being performed by Landlord in such manner as to maintain harmonious labor relations during the performance of the Base Building Improvements and not to damage the Building or Lot or interfere with Building or Lot operations. All work described in Tenant's Work shall be performed by Landlord's Contractor (if Tenant enters into a contract with Landlord's Contractor for the initial Tenant's Work) or by a contractor selected by Tenant and approved by Landlord, which approval shall not be unreasonably withheld ("Tenant's Contractor"). The performance of Tenant's Work in accordance with this Lease shall not be deemed to be a violation of the Permitted Uses of the Premises. Except as set forth in Sections 3.3 and 5.1.10 hereof and Exhibit E hereto, all Tenant's Work shall become a part of the Premises and upon termination of this Lease shall be considered to be the property of the Landlord.

Tenant shall not effect any Tenant's Work (or any alterations or additions to the Premises after performance of Tenant's Work) that might (i) diminish the value of the Premises for laboratory/office use, or (ii) require any unusual expense to re-adapt the Premises for any laboratory/office use.

Tenant's Work shall be performed in accordance with complete, consistent, final construction drawings and specifications ("Construction Documents") approved in advance by Landlord in writing, which approval shall not be unreasonably withheld. The Construction Documents shall be prepared and stamped by Tenant's Architect and approved by Landlord in writing. Landlord reserves the right to reject, in whole or in part, the Construction Documents which in its reasonable opinion fail to comply with the provisions of this Lease within fifteen (15) business days of its receipt thereof (the "Review Period"). The Review Period shall not commence unless and until Tenant delivers a complete set of Construction Documents. If Landlord shall disapprove the Construction Documents, it shall state specifically the reasons therefor, and Tenant shall promptly revise and resubmit the Construction Documents. If Landlord fails to respond to Tenant's request for approval of the Construction Documents within the Review Period then the Construction Documents shall be deemed approved.

Tenant shall be solely responsible for the liabilities of and expenses of all architectural and engineering services relating to Tenant's Work and for the adequacy, accuracy, and completeness of the Construction Documents approved by Landlord unless Tenant elects that Landlord advance the Tenant Allowance (and if so elected, then only to the extent of the Tenant Allowance). The Construction Documents (i) shall set forth in detail the requirements for construction of the Tenant's Work (including all architectural, mechanical, electrical and structural drawings and detailed specifications), (ii) shall be fully coordinated with one another, with field conditions as they exist in the Premises and elsewhere in the Building and the Final Design Documents, and (iii) shall show all work necessary to complete the Tenant's Work including all cutting, fitting, and patching and all connections to the mechanical and electrical systems and components of the Building. Tenant agrees to hold Landlord harmless if any Tenant's Work described in the Construction Documents (a) fails to comply with all applicable laws, regulations, building codes, and building design standards, (b) in any manner affects any structural component of the Building (including, without limitation, exterior walls, exterior windows, core walls, roofs or floor slabs), (c) in any respect is incompatible with the electrical and mechanical components and systems of the Building, (d) affects the exterior of the Building, (e) fails to conform to floor loading limits, and
(f) with respect to all materials, equipment and special designs, processes, or products, infringes on any patent or other proprietary rights of others. Landlord's approval or deemed approval of the Construction Documents and the performance of Tenant's Work pursuant to the Construction Documents shall not result in any liability of Landlord, except to the extent that Tenant elects to have

Landlord advance the Tenant Allowance, and Landlord's approval of Construction Documents shall signify only Landlord's consent to Tenant's Work shown thereon and shall not result in any responsibility of Landlord concerning compliance of Tenant's Work with laws, regulations, or codes, coordination of any aspect of Tenant's Work with any other aspect of Tenant's Work, or the feasibility of constructing Tenant's Work without material damage or harm to the Building, all of which shall be the sole responsibility of Tenant.

After Tenant's Contractor has been approved, then the same may thereafter be used by Tenant until Landlord notifies Tenant that Tenant's Contractor is no longer approved due to Tenant's Contractor's failure to comply in any material respect with the requirements of the Construction Documents and/or this Lease. Tenant shall procure all necessary governmental permits, licenses and approvals before undertaking any Tenant's Work. Tenant shall perform all

Tenant's Work at Tenant's risk in compliance with all applicable laws, codes and regulations and in a good and workmanlike manner employing new materials of good quality. When any Tenant's Work is in progress, Tenant shall cause to be maintained (i) insurance as may be required by Landlord covering any additional hazards due to such Tenant Work, and (ii) a statutory lien bond pursuant to M.G.L. c.254, ss.12 or any successor statute (or such other protection of Landlord's interest in the Building and Lot against liens as Landlord may reasonably require), in each case for the benefit of Landlord. It shall be a condition of Landlord's approval of any Tenant's Work that certificates of such insurance and a lien bond in recordable form, both issued by responsible insurance companies qualified to do business in Massachusetts and reasonably approved by Landlord, shall have been deposited with Landlord, that Tenant has provided Tenant's certification of the insurable value of the work in question for casualty insurance purposes, and that all of the other conditions of the Lease have been satisfied. Tenant shall reimburse up to [*****Confidential*****] for Landlord's reasonable costs of reviewing proposed Tenant's Work and inspecting installation of the same, provided however, that if Tenant elects to have Landlord advance the Tenant Allowance, such costs may be paid from the Tenant Allowance. At all times while performing Tenant's Work, Tenant shall require any Tenant's Contractor to comply with all applicable laws, regulations, permits and policies relating to such work. In performing Tenant's Work, each Tenant's Contractor shall comply with the Development Approvals, the Subsequent Approvals (in each case to the extent applicable), Landlord's requirements set forth in Section 3.2.1, the first paragraph of Section 3.3, Section 5.1.5 and
Section 5.2.3 hereof relating to the time and methods for such work, use of delivery elevators and other Building facilities and each Tenant's Contractor shall not interfere or disrupt Landlord's Contractor. Each Tenant's Contractor shall in all events work on the Premises without causing labor disharmony, coordination difficulties, or delay, and without impairing any guaranties, warranties or obligations of any contractors of Landlord. If any Tenant's Contractor uses any Building services or facilities, such Contractor, jointly and severally with Tenant, shall agree to reimburse Landlord for the cost thereof based on Landlord's schedule of charges established from time to time (and if no such charges have been established, then based on Landlord's reasonable charge established at the time). Each Tenant's Contractor shall, by entry into the Building, be deemed to have agreed to indemnify and hold Landlord harmless from any claim, loss or expense arising in whole or in part out of any act or neglect committed by such person while in the Building, to the same extent as Tenant has so agreed in this Lease, the indemnities of Tenant and Tenant's Contractor to be joint and several.

Tenant shall pay on or prior to date when any such payment is due, either from its own funds or from the Tenant Allowance if Tenant elects to have Landlord advance the Tenant Allowance, the entire cost of all Tenant's Work so that the Premises shall always be free of liens for labor or materials. If any mechanic's lien (which term shall include all similar liens relating to the furnishing of labor and materials) is filed against the Premises or the Building or any part thereof which is claimed to be attributable to Tenant, its agents, employees or contractors, Tenant shall promptly discharge the same by payment or filing any necessary bond within thirty (30) days after Tenant has notice (from any source) of such mechanic's lien. Landlord may, as a condition of its approval of any Tenant's Work, require Tenant to deposit with Landlord a bond, letter of credit or other similar security in the amount of Landlord's reasonable estimate of the value of such Work securing Tenant's obligations to make payments for such Work.

Landlord shall permit Tenant and Tenant's Contractor access to the Premises prior to the Commencement Date for the performance of Tenant's Work if Tenant employs Landlord's Contractor or another contractor approved by Landlord for the performance of Tenant's Work and if the concurrent performance of the Base Building Improvements and Tenant's Work will not delay the Substantial Completion Date. Subject to the foregoing, Landlord shall cooperate with Tenant's Contractor in connection with Tenant's Work. Subject to Sections 7.1(h) and 10.6 hereof, Tenant shall, in any event, substantially complete all Tenant's Work required for the initial occupancy of (a) fifty percent (50%) of the Premises by Tenant within six (6) months after the Commencement Date, (b) seventy-five percent (75%) of the Premises within twenty-four (24) months after the Commencement Date, and (c) one hundred percent (100%) of the Premises within thirty-six (36) months after the Commencement Date.

If Tenant elects to have Landlord advance the Tenant Allowance, Tenant shall provide Landlord with a budget and copies of all contracts entered into with respect to Tenant's Work and such other information as Landlord reasonably may request. The Tenant Allowance shall be advanced to Tenant by Landlord no more frequently than monthly against costs then incurred but unpaid by Tenant with respect to Tenant's Work. The Tenant Allowance shall be advanced to Tenant in the proportion which the Tenant Allowance

bears to Tenant's budget, as the same may be updated, for Tenant's Work. Tenant shall make application to Landlord for an advance of the Tenant Allowance at least ten (10) business days prior to the date upon which an advance is to be made. Such application shall be on such form or forms as Landlord reasonably may require, and shall be accompanied by invoices, receipts, lien waivers and such other documents as Landlord reasonably may require.

3.3 GENERAL PROVISIONS APPLICABLE TO CONSTRUCTION.

All construction work required or permitted by this Lease, whether by Landlord or by Tenant, shall be done in a good and workmanlike manner and in compliance with all Development Approvals, Subsequent Approvals, applicable laws and all lawful ordinances, regulations and orders of any governmental authority or insurer of the Building. Either party may inspect the work of the other at reasonable times and shall give notice of observed defects. Landlord shall not be responsible for any loss, damage, or injury resulting from the installation of any components, fixtures, or equipment provided they were appropriately specified and installed in accordance with the manufacturer's or supplier's instructions; provided, however, that Landlord shall assign any and all contractor's, manufacturer's and supplier's warranties with respect to all components, fixtures, or equipment, including, without limitation, Landlord's Contractor's warranty, to Tenant for the Term of this Lease, upon the expiration or sooner termination of which such warranties shall automatically revert to Landlord.

After the performance of Tenant's Work, Tenant will not make any alterations or additions to the Premises without Landlord's approval, which approval shall not be unreasonably withheld or delayed provided that Landlord and Tenant shall agree in writing whether Tenant will be required to, permitted to or forbidden to, at Tenant's sole cost and expense, remove any such alteration or addition upon the expiration or termination of this Lease. Landlord's approval of any alteration or addition which is not a Minor Alteration (as defined below in this Section 3.3) shall be deemed to have been given if Landlord fails to notify Tenant of its objection thereto

within fifteen (15) business days after Tenant's request for such approval. In circumstances in which Tenant desires the right to remove additions or alterations at the expiration or termination of this Lease, Landlord shall reasonably agree, and such agreement shall not be unreasonably withheld or delayed (and shall be deemed to have been given if Landlord fails to notify Tenant of its objection thereto within fifteen (15) business days after Tenant's request for such agreement), to permit such removal (i) where items installed by Tenant are in the nature of equipment, but are so affixed to Building that such items may be construed as fixtures or (ii) where additions or alterations of Tenant include specific items that after removal from the Building will have in the aggregate for each such alteration or addition a fair market value of $25,000.00 or greater. Tenant's rights to remove additions or alterations hereunder shall not apply to replacement of items included in Tenant's Work that are replaced due to the fact that such items have worn out or become substantially obsolete. In the event the Tenant is required to or permitted to remove any such alteration or addition, as a condition to Landlord's approval of such alteration or addition, Tenant shall agree in writing to readapt, repair and restore the Premises to the condition the same were in prior to such alteration or addition. After the performance of Tenant's Work, all changes and additions shall be part of the Building except such items as by writing at the time of approval the parties agree either shall be removed by Tenant on termination of this Lease, or shall be removed or left at Tenant's election.

Notwithstanding the foregoing, the parties hereby agree that for any non-structural alterations or additions to the Premises which do not involve modifications to the Building operating systems and for which the cost may be reasonably estimated to be less than $100,000 (each a "Minor Alteration"): (i) Landlord's prior written consent shall not be required unless such Minor Alteration requires a building permit from the City of Cambridge, in which case Landlord's reasonable consent shall be required, provided that such consent shall be deemed to have been given if Landlord fails to notify Tenant of its objection to such Minor Alteration within 2 days after Tenant's request for Landlord's consent with respect thereto, and (ii) upon the expiration or termination of this Lease, Tenant shall readapt, repair and restore the Premises to the condition the same were in prior to such Minor Alteration, regardless of whether Landlord's consent was required or obtained with respect thereto. Additionally, Tenant shall give prior written notice to Landlord of any Minor Alteration for which the cost may be reasonably estimated to be less than $100,000 but greater than $25,000 and regardless of whether Landlord's consent is required.

The parties further agree that after the performance of Tenant's Work (a) any request for consent to any alteration or addition (including, without limitation, any Minor Alteration) shall be accompanied by drawings and specifications in reasonable detail given the size and scope of the proposed alteration or addition, and (b) Tenant shall furnish Landlord as-built drawings showing any and all alterations or additions (including, without limitation, any and all Minor Alterations) made by Tenant or any assignee, sublessee or licensee of Tenant within 30 days after completion of the same.

3.4 REPRESENTATIVES.

Each party authorizes the other to rely in connection with their respective rights and obligations under this Article III upon approval

and other actions on the party's behalf by Land-

lord's Representative in the case of Landlord and Tenant's Representative in the case of Tenant or by any person hereafter designated in substitution or addition by notice to the party relying.

3.5 CORRECTION OF LANDLORD'S WORK.

If within one year after the Substantial Completion Date (i) any item of Base Building Improvements does not conform with the Final Design Documents, as affected by Change Orders, or (ii) there is any defect in the Base Building Improvements caused by faulty workmanship performed on behalf of Landlord or materials installed on behalf of Landlord, Landlord, upon written notice thereof from Tenant prior to the expiration of such one-year period, shall forthwith cause the contractor(s) who or which performed such work to correct such nonconformity or defect without cost or expense to Tenant. Nothing set forth in this Section shall affect or impair any warranties specified in Section 3.3 hereof or any right of Tenant to pursue any action, right or remedy otherwise available to Tenant due to a breach by Landlord of its obligations pursuant to this Lease.

ARTICLE IV

RENT

4.1 FIXED RENT.

(a) Monthly Installments; Definitions. Commencing on the Rent Commencement Date, Tenant covenants and agrees to pay Fixed Rent (as hereinafter defined) for the Premises to Landlord by wire transfer as Landlord may from time to time direct in writing, without any offset or reduction whatsoever (except as may be made in accordance with the express provisions of this Lease), or in the absence of wire transfer instructions from Landlord, at the Original Address of Landlord or at such other place or to such other person or entity as Landlord may by notice to Tenant from time to time direct, in the amount of (x) the Annual Fixed Rent Rate set forth in Article I multiplied by (y) the Rentable Square Footage of Premises, and subject to adjustment as set forth in Sections 4.1(b) 10.11 and 10.12 hereof (collectively "Fixed Rent" or "Annual Fixed Rent"), in equal installments equal to 1/12th of the Annual Fixed Rent Rate in advance on the first day of each calendar month included in the Term; 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.

(b) Adjustment for CPI. On the fifth anniversary of the Rent Commencement Date , on the tenth anniversary of the Rent Commencement Date, and on the fifth anniversary of the commencement of each Extension Period (as such term is defined in Section 10.12 hereof) (each an "Adjustment Date") the 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 published prior to the 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 then prior five (5) years of the 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 (a) the Commencement Date or (b) with respect to any Extension Period, the commencement date of such Extension Period, as applicable. In the event the Price Index (or a successor or substitute index) shall not be published for the City of Boston, 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.

4.2 ADDITIONAL RENT.

As used herein, the term "Additional Rent" shall mean all rent, charges and other sums, other than Fixed Rent, due Landlord pursuant to this Lease. All regularly recurring items of Additional Rent, such as the Annual Maintenance Charge, shall be paid by Tenant to Landlord by wire transfer as Landlord may from time to time direct in writing, or in the absence of wire transfer instructions from Landlord, at the Original Address of Landlord. Nonrecurring items of Additional Rent shall be paid by Tenant to Landlord by check or

wire transfer as Tenant may from time to time elect. In order that the Fixed Rent shall be absolutely net to Landlord, commencing on the Commencement Date, Tenant covenants and agrees to pay, as Additional Rent, without any offset or reduction whatsoever except as expressly set forth in this Lease, taxes, municipal or state betterment assessments, insurance costs, utility charges and the Annual Maintenance Charge with respect to the Premises as provided in this Section 4.2 as follows:

As used herein, the term "Estimated Annual Additional Rent" shall mean and refer to Landlord's estimate of the total amount of Additional Rent which may be due from Tenant for any particular Lease Year with respect to the Building, Lot and Complex. Landlord shall furnish Tenant with a statement within sixty (60) days after the commencement of each Lease Year setting forth the amount of Landlord's Estimated Annual Additional Rent for such Lease Year. Landlord's good faith estimate of the Estimated Annual Additional Rent for the first "fiscal year" (as such term is defined in Section 4.2.4 hereof) of the Term is set forth in Section 1.1 as the "Initial Estimated Annual Additional Rent for Premises" and "Initial Estimated Annual Additional Rent for Complex".

4.2.1 Real Estate Taxes. Tenant shall pay directly to the Landlord: (i) Tenant's Proportionate Fraction for Building and Tenant's Proportionate Fraction for Complex, respectively, of all taxes, assessments (special or otherwise), levies, fees, water and sewer rents and charges, and all other government levies and charges, general and special, ordinary and extraordinary, foreseen and unforeseen, which are, at any time during the Term hereof, imposed or levied upon or assessed against the Premises, the Building, the Lot or the Complex, and
(ii) the full amount of any tax or assessment imposed or levied upon or against (A) any Fixed Rent, Additional Rent or other sum payable hereunder, (B) this Lease, or the leasehold estate hereby created, or which arise in respect of the operation, possession or use of the Premises; (C) all gross receipts or similar taxes imposed or levied upon, assessed against or measured by any

Fixed Rent, Additional Rent or other sum payable hereunder; and (D) all sales, value added, use and similar taxes at any time levied, assessed or payable on account of the acquisition, leasing or use of the Premises (and Tenant's Proportionate Fraction for Building and Tenant's Proportionate Fraction for Complex, respectively, of any such taxes if they are levied, assessed or payable on account of the acquisition, leasing or use of the entire Building, Lot or the Complex) which may become a lien on the Building, the Lot, the Premises or the Complex (collectively "taxes and assessments" or if singular "tax or assessment"). For each tax or assessment period, or installment period thereof, wholly included in the Term, all such payments shall be made by Tenant not more than twenty (20) days after receipt of an invoice therefor. For any fraction of a tax or assessment period, or installment period thereof, included in the Term at the beginning or end thereof, Tenant shall pay to Landlord, within twenty 20 days after receipt of an invoice therefor, Tenant's Proportionate Fraction for Building and Tenant's Proportionate Fraction for Complex, as applicable, of taxes and assessments so levied or assessed or becoming payable which is allocable to such included period. At Landlord's option, Tenant shall pay taxes and assessments in accordance with Section 4.2.5 hereof. Subject to Tenant's payment to Landlord of taxes and assessments as and when required by this
Section 4.2.1, Landlord agrees to pay such tax and assessments to the proper authorities prior to delinquency and to provide Tenant with evidence of such payment upon request therefor. Anything herein to the contrary notwithstanding,
(i) until the Lot is a separately assessed parcel, Landlord shall make a reasonable allocation of any taxes and assessments between the Lot and the Building and the Complex of which the Lot is a part, (ii) taxes and assessments for the Building and Lot shall not include any taxes and assessments for other portions of the Complex and (iii) taxes and assessments for the Complex shall not include taxes and assessments for the Building or Lot.

Nothing contained in this Lease shall, however, require Tenant to pay any income taxes, excess profits taxes, excise taxes, franchise taxes, or any taxes or assessments with respect to the Garage and other buildings leased or available for lease (and the parcels of land upon which such buildings are situated), other than the Building, the Lot and any building or portion of a building in the Complex which is not designed and available for lease to third parties (and the parcel(s) of land on which the same may be located) in the Complex ("Excluded Taxes"), estate, succession, inheritance or transfer taxes, provided, however, that if at any time during the Term the present system of ad valorem taxation of real property shall be changed so that in lieu of the whole or any part of the ad valorem tax on real property, there shall be assessed on Landlord a capital levy or other tax on the gross rents received with respect to the Building, the Lot, or the Complex or all of them, or a federal, state, county, municipal, or other local income, franchise, excise or similar tax, assessment, levy or charge (distinct from any now in effect) measured by or based, in whole or in part, upon gross rents, then any and all of such taxes, assessments, levies or charges, to the extent so measured or based ("Substitute Taxes"), Tenant's Proportionate Fraction for Building and Tenant's Proportionate Fraction for Complex, respectively, of Substitute Taxes shall be payable by Tenant; provided, however, that (i) Tenant's obligation with respect to the aforesaid Substitute Taxes shall be limited to the amount thereof as computed at the rates that would be payable if the Building and Lot and buildings not available for lease (and the parcel(s) of land on which the same may be located) were the only property of Landlord, and (ii) only that portion of the Substitute Taxes in excess of the Excluded Taxes shall be payable by Tenant. Landlord shall furnish to Tenant a copy of any notice of any public, special or betterment assessment received by Landlord concerning the Building and Lot.

In the event that Tenant requests that Landlord apply for any abatement of, or otherwise contest, any tax or assessment, Landlord shall file such abatement or otherwise contest such tax or assessment and shall diligently pursue the same to completion, provided that (i) Landlord receives notice of such request from Tenant be made under applicable law, and (ii) the expenses of such proceedings, including, without limitation, any penalties, interest, late fees or charges, and attorneys' fees incurred as a result thereof, shall be included in the Annual Maintenance Charge of the then current fiscal year.

4.2.2 Insurance.

4.2.2.1 Insurance Taken Out by Tenant.

Tenant shall take out and maintain throughout the Term the following insurance:

(a) Comprehensive liability insurance indemnifying Landlord and Tenant against all claims and demands for (i) injury to or death of any person or damage to or loss of property, on the Premises or adjoining walks, streets or ways, or connected with the use, condition or occupancy of any thereof unless caused by the negligence of Landlord or its servants or agents, (ii) violation of this Lease, or (iii) any act, fault or omission, or other misconduct of Tenant or its agents, contractors, licensees, sublessees or invitees, in amounts which shall, at the beginning of the Term, be at least equal to the limits set forth in Section 1.1, and, from time to time during the Term, shall be for such higher limits, if any, as are customarily carried in the area in which the Premises are located on property similar to the Premises and used for similar purposes; and shall be written on the "Occurrence Basis" and include Host Liquor liability insurance;

(b) Worker's compensation insurance with statutory limits covering all of the Tenant's employees working on the Premises; and

(c) All risk, fire and casualty insurance on a 100% replacement cost basis covering all Tenant's Work.

4.2.2.2 Insurance Taken Out by Landlord.

Landlord shall take out and maintain throughout the Term the following insurance:

(a) Comprehensive liability insurance for the Building, the Lot and the Complex of the same nature and type as described in Section 4.2.2.1(a) of this Lease, and with the same policy limits or such higher policy limits as Landlord may reasonably determine; and

(b) All risk, fire and casualty insurance on a 100% replacement cost basis, together with rental loss coverage and, if the Building is located in a flood zone, flood

coverage to the extent the same is available, insuring the Building and its rental value and Complex Common Areas; and

(c) Insurance against loss or damage from sprinklers and from leakage or explosions or cracking of boilers, pipes carrying steam or water, or both, pressure vessels or similar apparatus, in the so-called "broad form", in such amounts as are customary and commercially reasonable for buildings in the Cambridge, Massachusetts area which are of like kind and quality to the Building and have laboratory uses, and insurance against such other hazards and in such amounts as may from time to time be required by any bank, insurance company or other lending institution holding a first mortgage on the Building, the Lot or the Complex.

Landlord shall have no obligation to insure Tenant's personal property or chattels, including without limitation, Tenant's trade fixtures.

4.2.2.3 Tenant Reimbursement of Insurance Taken Out by Landlord.

Tenant shall from time to time reimburse Landlord within thirty days of Landlord's invoice for Tenant's Proportionate Fraction for Building and Tenant's Proportionate Fraction for Complex of Landlord's costs incurred in providing the insurance provided pursuant to Section 4.2.2.2 of this Lease for the Building, Lot and Complex Common Areas, which will be equitably allocated by Landlord in the case of blanket policies to reflect the insurance coverage reasonably attributable to the Premises, the Building, the Lot, other buildings in the Complex, and Complex Common Areas and provided further that Tenant shall reimburse Landlord for all of Landlord's costs incurred in providing such insurance which is attributable to any special endorsement or increase in premium resulting from the business or operations of Tenant, and any special or extraordinary risks or hazards resulting therefrom, including without limitation, any risks or hazards associated with the generation, storage and disposal of medical waste. At Landlord's option, Tenant shall reimburse Landlord for insurance costs in accordance with Section 4.2.5 hereof.

4.2.2.4 Certain Requirements Applicable to Insurance Policies.

Policies for insurance provided for under the provisions of Sections 4.2.2.2(b) and 4.2.2.2(c) shall, in case of loss, be first payable to the holders of any mortgages on the Building, the Lot or the Complex under a standard mortgagee's clause, and shall be deposited with the holder of any mortgage or with Landlord, as Landlord may elect. All policies for insurance required to be obtained by either party under the provisions of Section 4.2.2 shall be obtained from responsible companies qualified to do business in the state in which the Premises are located and in good standing therein, which companies and the amount of insurance allocated thereto shall be subject to Landlord's approval. Each party agrees to furnish the other with certificates of all such insurance which such party is obligated to obtain pursuant to Section
4.2.2 prior to the beginning of the Term hereof and with renewal certificates at least 30 days prior to the expiration of the policy they renew. In addition, Tenant agrees to furnish Landlord with any policies of insurance which Tenant is obligated to obtain hereunder, including any renewal policies, upon request of any of Landlord's mortgagees (provided that Tenant may redact from

such policies any Confidential Information, as defined in Section 10.15 hereof). Each such policy required to be maintained by Tenant shall name Landlord and Landlord's Managing Agent as additional insureds and shall be noncancellable with respect to the interest of Landlord, Landlord's Managing Agent and such mortgagees without at least 30 days' prior written notice thereto.

4.2.2.5. Waiver of Subrogation.

All insurance which is carried by either party with respect to the Premises or to furniture, furnishings, fixtures or equipment therein or alterations or improvements thereto, whether or not required, shall include provisions which either designate the other party as one of the insured or deny to the insurer acquisition by subrogation of rights of recovery against the other party to the extent such rights have been waived by the insured party prior to occurrence of loss or injury, insofar as, and to the extent that such provisions may be effective without making it impossible to obtain insurance coverage from responsible companies qualified to do business in the state in which the Premises are located (even though extra premium may result therefrom) and without voiding the insurance coverage in force between the insurer and the insured party. In the event that extra premium is payable by either party as a result of this provision, the other party shall reimburse the party paying such premium the amount of such extra premium. If at the request of one party, this non-subrogation provision is waived, then the obligation of reimbursement shall cease for such period of time as such waiver shall be effective, but nothing contained in this Section 4.2.2.5 shall derogate from or otherwise affect releases elsewhere herein contained of either party for claims. Each party hereby waives all rights of recovery against the other for loss or injury against which the waiving party is protected by insurance containing said provisions, reserving, however, any rights with respect to any excess of loss or injury over the amount recovered by such insurance. Tenant shall not acquire as insured under any insurance carried on the Premises under the provisions of this
Section 4.2.2 any right to participate in the adjustment of loss or to receive insurance proceeds and agrees upon request promptly to endorse and deliver to Landlord any checks or other instruments in payment of loss in which Tenant is named as payee.

4.2.3 Utilities.

Landlord and Tenant agree that the Design Documents shall include separate metering or submetering of all Utility Services (as hereinafter defined) for the Premises and the Retail Space. Accordingly, to the extent such Utility Services are separately metered or submetered, Tenant shall pay directly to the proper authorities charged with the collection thereof all charges for water, sewer, gas, electricity, steam, telephone and other utilities or services (singularly "Utility Service" and collectively, "Utility Services") used or consumed on the Premises, whether called charge, tax, assessment, fee or otherwise, including, without limitation, water and sewer use charges and taxes, if any, all such charges to be paid as the same from time to time become due. If Tenant is not charged directly by the respective utility for any of such Utility Services, Tenant shall from time to time, within 20 days of receipt of Landlord's invoice therefor, pay to Landlord Tenant's Proportionate Fraction of the total of such charges for the Building, Lot or Complex provided that, at Landlord's option, all such charges shall be payable by Tenant in accordance with Section 4.2.5. It is understood and agreed that (i)

Landlord shall be responsible for bringing Utility Services to a common switching point(s) at the Building, which, in the case of electricity shall mean the switch gear and not the transformer (collectively, the "Utility Switching Points") as shown on the Final Design Documents at Landlord's cost and expense;
(ii) Tenant shall pay for any and all costs to connect such Utility Services from such Utility Switching Points to the Premises; (iii) Landlord shall be under no obligation to furnish any Utility Services to the Premises (beyond the foregoing responsibility to bring such Utility Services to the Utility Switching Points and as may be shown on the Final Design Documents; and (iv) subject to
Section 3.2 hereof, Landlord shall not be liable for any interruption or failure in the supply of any such utilities to the Premises; provided, however, that in the event such loss or failure is due to Landlord's negligence or willful misconduct, Landlord shall be responsible for restoring the supply of such Utility Services to the Premises but otherwise shall have no liability to Tenant. Subject to the foregoing, Landlord agrees that heating, ventilating and air conditioning service and all other Utility Services serving the Premises

shall be available to Tenant twenty-four (24) hours per day, seven (7) days per week.

To the extent permitted by law, Landlord shall have the right at any time and from time to time during the Term to contract for or purchase one or more Utility Services from any company or third party, including without limitation, electricity, steam, chilled water and natural gas (collectively "Utilities") providing Utilities (the "Utility Service Provider" or "Utility Service Providers"), which contracts or purchases, in Landlord's reasonable opinion, are likely to result in a reduction in costs for Utility Services to the occupants of the Building or of the Complex taken as a whole. Tenant, at no cost to Tenant, agrees to reasonably cooperate with Landlord and the Utility Service Providers and at all times and, as reasonably necessary, and on reasonable advance notice, shall allow Landlord and the Utility Service Providers reasonable access to any utility lines, equipment, feeders, risers, fixtures, wiring and any other such machinery or personal property within the Premises and associated with the delivery of Utility Services. Tenant may, but shall not be required to, purchase Utilities from respective Utility Service Providers.

4.2.4 Common Area Maintenance and Expenses.

Landlord shall maintain the Building Common Areas and Complex Common Areas in the same quality and condition as other comparable buildings in Cambridge, including without limitation, keeping the Building Common Areas and the Complex Common Areas clean and free of debris, keeping the sidewalks, driveways and parking areas reasonably clear of snow and ice, maintaining the exterior landscaping, lighting, parking areas and sidewalks of the Lot and Complex, maintaining passenger and freight elevator service, providing Utility Services to the Premises (if any of such Utility Services are not separately metered or submetered), Building Common Areas and Complex Common Areas, including hot water for lavatory purposes and cold water (at temperatures supplied by the provider thereof) for drinking, lavatory and toilet purposes, and providing security services for the Building, Lot and Complex to a standard comparable to security services provided at other comparable buildings in Cambridge. Tenant shall provide cleaning and janitorial services for the Premises, shall maintain the interior of the Premises, including the mechanical, electrical and plumbing systems of the Premises in good order, repair and condition (provided that if Tenant shall fail to effect such repairs or maintenance or Tenant shall elect to have Landlord perform such repairs or maintenance,

Landlord may or shall, as applicable, effect such repairs or maintenance and charge the entire cost thereof to Tenant as Additional Rent) and may maintain security services for the Premises. Notwithstanding the foregoing, it is expressly understood and agreed that Landlord shall have no liability or responsibility for the storage, containment or disposal of any hazardous or medical waste generated, stored or contained by Tenant, Tenant hereby agreeing to store, contain and dispose of any and all such hazardous or medical waste at Tenant's sole cost and expense in accordance with the provisions of Article V hereof.

Tenant shall pay to Landlord as Additional Rent the Annual Maintenance Charge computed and payable as follows:

(1) The Annual Maintenance Charge shall be equal to the sum of the "Annual Building Maintenance and Operation Charge", the "Annual Complex Maintenance and Operation Charge" and the "Nonstandard Charge" as hereinafter defined.

(a) The "Annual Building Maintenance and Operation Charge" shall be equal to Tenant's Proportionate Fraction for Building on account of all costs incurred by Landlord during the then current fiscal year in operating the Building and Lot and providing maintenance, including without limitation maintenance, operation and repair of the Lot and the Building and all heating, plumbing, electrical, air conditioning and mechanical fixtures and equipment serving Building Common Areas, Utility Services for Building Common Areas, maintenance of Lot and Building signage, elevators, landscaping, snow removal, trash dumpster rental, trash removal, management fees (which management fees shall not exceed those commercially reasonable for buildings in first-class, mixed use projects in Cambridge and which are used for purposes similar to the use of the Building and which management fees may be based upon a percentage of rent payable by tenants of the Building), amortization of equipment to the extent used for Building or Lot operation and maintenance, and all costs incurred by Landlord in order for Landlord to comply with the Development Approvals and Subsequent Approvals and which are recurring or properly categorized as operating or maintenance costs ("Impositions") and equitably attributable or allocated to the Building or Lot.

(b) The "Annual Complex Maintenance and Operation Charge" shall be equal to Tenant's Proportionate Fraction for Complex on account of all costs incurred by Landlord during the then current fiscal year in operating the Complex Common Areas and providing Complex Common Areas maintenance, including without limitation, maintenance, operation and repair of all heating, plumbing, electrical, air conditioning and mechanical fixtures and equipment serving Complex Common Areas, Utility Services for Complex Common Areas, maintenance of Complex Common Area signage, elevators, landscaping, snow removal, trash dumpster rental, trash removal, management fees (which management fees

shall not exceed those commercially reasonable for buildings in Cambridge and which are used for purposes similar to the use of the

Building and which management fees may be based upon a percentage of rent payable by tenants of the Complex), amortization of equipment to the extent used for Complex Common Areas operation and maintenance and all Impositions equitably attributable to or allocated to the Complex.

(c) Anything herein to the contrary notwithstanding, (i) the Annual Maintenance Charge shall not include (1) leasing and sales commissions for the Building or any portion thereof or any other building in the Complex, (2) fees paid in connection with any tenant improvement costs for the Building or any other building in the Complex, (3) such other fees and commissions paid in connection with the leasing, re-leasing, extension or renewal of leases for the Building or any other building in the Complex, (4) costs incurred with respect to the operation and maintenance of any other building in the Complex which is leased or available for lease, any rentable space therein or any common areas or facilities in such buildings (except to the extent that Landlord maintains a management office therein or in the Building, in which event Tenant shall pay Tenant's Proportionate Fraction for Complex of the fair market rental value thereof as equitably determined by Landlord), (5) any cost or expense attributable to the underground garage(s) within the Complex, including but not limited to the Garage, (6) costs and expenses which are properly attributable to a particular building (other than the Building) or a particular tenant thereof, (7) third party management fees for the Building and Complex included in the Annual Maintenance Charge to the extent such fees exceed market rate fees, (8) any management or supervisory fee of Landlord if a third party is managing the Building or Complex (but if Landlord is self-managing the Building or Complex, Landlord shall be entitled to reimbursement of its reasonable costs for managing the Building and Complex provided that in no event may Landlord's costs and fees for self-managing the Building or Complex exceed the costs and fees that a market-rate third party management company would charge for providing comparable services), (9) in the event that any capital repair, improvement or replacement to the Building Common Areas or the Complex Common Areas made by Landlord has a useful life of over one year (as determined in accordance with generally accepted accounting practices consistently applied), then only the amortized cost of such repair, improvement or replacement over said useful life shall be included in the Annual Building Maintenance and Operation Charge or Annual Complex Maintenance and Operation Charge, as applicable, provided that replacement of a capital item shall be of substantially the same quality and/or usefulness as the capital item being replaced or shall be expected to reduce the Annual Maintenance Charge or otherwise provide some other economic benefit to the operation of the Premises, Building, Lot or Complex, as applicable, such as conserving energy or environmental resources, or if such capital item is required by any law enacted after the

date hereof, (10) wages, salaries, or other compensation or benefits paid to any persons above the grade of Building manager and Complex manager (or equivalent position), (11) debt service, (12) capital expenditures (except to the extent expressly permitted under this Section), (13) depreciation and amortization (except to the extent expressly permitted under this Section), (14) legal and accounting fees relating to (A) disputes with occupants of the Building or Complex, or (B) disputes with purchasers, prospective purchasers, mortgagees or prospective mortgagees, (15) any rent under any ground or underlying lease, (16) any fines or penalties incurred due to violations of law by Landlord or any tenant or other occupant of the Building or Complex, (17) any amount incurred to any entity affiliated with Landlord to the extent the same exceeds the amount which would have been incurred on an arm's length basis in the absence of such affiliation, (18) any interest, fines or penalties incurred or resulting from late payment by Landlord of any operating expense, (19) costs incurred in connection with the Environmental Remediation, (20) any amounts incurred for repairs or other work occasioned by fire, windstorm or other casualty to the extent Landlord is reimbursed by insurance or would have been reimbursed by insurance had Landlord maintained the insurance it is required to maintain under this Lease, (21) costs incurred in connection with the permitting, financing, refinancing, purchase or sale, or construction of the Building and Complex, and (22) any so-called asset management fees, (ii) the Annual Building Maintenance and Operation Charge shall not include any cost properly included in the Annual Complex Maintenance and Operation Charge or properly included in the Nonstandard Charge, (iii) the Annual Complex Maintenance and Operation Charge shall not include any cost properly included in the Annual Building Maintenance and Operation Charge or properly included in the Nonstandard Charge, and (iv) the Nonstandard Charge shall not include any cost properly included in the Annual Building Maintenance and Operation Charge or the Annual Complex Maintenance and Operation Charge.

(d) Notwithstanding anything herein to the contrary, if Landlord furnishes or makes available any service, utility or facility to less than all of the tenants of the Building or Complex, as applicable, Landlord shall allocate all costs incurred by Landlord on account of such services, utilities or facilities to the tenants of the Building or Complex, as applicable, to whom or to which such services, utilities or facilities are furnished or made available (all such costs being herein referred to as the "Nonstandard Costs"). The "Nonstandard Charge" shall be equal to Tenant's share of Nonstandard Costs equitably allocated to Tenant by Landlord. By way of example, if Landlord furnishes Garage Security Services, trash services and/or cleaning services to laboratory tenants of the Building, but not to other tenants, Landlord shall allocate the cost thereof to laboratory tenants and Tenant shall pay Tenant's share thereof as equitably allocated by Landlord. In no event shall any cost incurred by

Landlord and payable by Tenant for insurance, Utility Services for the Premises which are separately metered or submetered, and taxes and assessments be included in the Annual Maintenance Charge payable by Tenant.

Attached hereto as Exhibit B-2 is a list (without estimated or actual amounts) of the Annual Maintenance Charge categories for Building Common Areas and Complex Common Areas, insurance, Mitigation Expenses and taxes and assessments. Landlord shall have the right to reasonably modify such list from time to time. Tenant shall make payments on account of the Annual Maintenance Charge monthly in advance on the first day of each calendar month during the Term. At the beginning of every fiscal year, Landlord shall deliver to Tenant its reasonable estimate of the Annual Maintenance Charge (the "Estimated Annual Maintenance Charge") for the said fiscal year which estimate may include a reasonable contingency of up to 5%, and Tenant shall make payments on account of the Annual Maintenance Charge monthly in advance on the first day of each calendar month during the Term in the amount of one-twelfth of the Estimated Annual Maintenance Charge. Landlord reserves the right to reasonably re-estimate and modify the Estimated Annual Maintenance Charge by notice to Tenant once annually on or about July 1 of each Lease Year (the "Additional Rent Adjustment Date"), and Tenant's payments shall thereupon be adjusted accordingly. Not later than sixty (60) days after the end of each fiscal year during the Term and after Lease termination, Landlord shall render a statement ("Landlord's Statement") in reasonable detail and according to usual accounting practices certified by Landlord and showing for the preceding fiscal year or fraction thereof, as the case may be, the actual Annual Maintenance Charges for the said fiscal year or fraction thereof, and thereupon any balance owed by Tenant or excess paid by Tenant under this Section shall be paid to Landlord, or credited to Tenant, as the case may be, on the next rent payment date. Tenant shall have the right for a period of one (1) year following its receipt of Landlord's Statement to examine Landlord's books and records concerning the Annual Maintenance Charge. Such examination may be made only by an independent certified public accounting firm or a full service real estate firm approved by Landlord, which approval shall not be unreasonably withheld, conditioned or delayed. Landlord may withhold its approval of any examiner of Tenant who or which is being paid by Tenant, in whole or in part, on a contingent fee basis. As a condition to performing any such examination, Tenant and its examiner shall be required to execute and deliver to Landlord an agreement, in form acceptable to Landlord, agreeing to keep confidential any information which it discovers about Landlord, the Building or the Complex in connection with such examination. If the Annual Maintenance Charge due was less than the Annual Maintenance Charge paid by Tenant, Landlord shall either promptly refund to Tenant the difference or credit same against rent next due from Tenant. If the Annual Maintenance Charge due was less than ninety-five percent (95%) of the Annual Maintenance Charge paid by Tenant, Landlord shall reimburse Tenant for the reasonable third-party costs of reviewing Landlord's books and records.

For purposes of this Lease, the first "fiscal year" shall be the annual period commencing on the Commencement Date and ending on December 31 of the year in which the Commencement Date occurs; subsequently, the term "fiscal year,, shall mean each consecutive annual period thereafter, commencing on the day following the end of the preceding fiscal year. Landlord shall have the right from time to time to change the periods of accounting under this Section
4.2.4 to any annual period other than a fiscal year, and upon any such change all items

referred to in this Section shall be appropriately apportioned. In all Landlord's Statements rendered under this Section, amounts for periods partially within and partially without the accounting periods shall be appropriately apportioned, and any items which are not determinable at the time of a Landlord's Statement shall be included therein on the basis of Landlord's estimate, and with respect thereto Landlord shall render promptly after determination a supplemental Landlord's Statement, and appropriate adjustment shall be made according thereto. All of Landlord's Statements shall be prepared on an accrual basis of accounting.

Notwithstanding any other provision of this Section 4.2.4, if the Term expires or is terminated as of a date other than the last day of a fiscal year, then for such fraction of a fiscal year at the end of the Term, Tenant's last payment to Landlord under this Section 4.2.4 shall be made on the basis of Landlord's best estimate of the items otherwise includable in Landlord's Statement and shall be made on or before the later of (a) 10 days after Landlord delivers such estimate to Tenant or (b) the last day of the Term. Landlord shall thereafter prepare a Landlord's Statement showing the actual Annual Maintenance Charge for such fiscal year, as hereinabove provided, and an appropriate payment or refund shall thereafter promptly be made upon submission of such Landlord's Statement to Tenant.

4.2.5 Payments on Account of Taxes, Insurance and Utilities.

Tenant shall make payments on account of the Annual Tax, Insurance and Utility Charge (as hereinafter defined) monthly in advance on the first day of each calendar month during the Term, which payments shall initially be in the amount of the sum of the Initial Tax Charge, the Initial Insurance Charge and the Initial Utility Charge (the "Estimated Initial Tax, Insurance and Utility Charges"). At the beginning of every fiscal year, Landlord shall deliver to Tenant its reasonable estimate of the Annual Tax, Insurance and Utility Charge ("the Estimated Annual Tax, Insurance and Utility Charge") for said fiscal year, and, in lieu of payments of one twelfth of the Estimated Initial Tax, Insurance and Utility Charge, Tenant shall make payments on account of the Annual Tax, Insurance and Utility Charge monthly in advance on the first day of each calendar month during the Term in the amount of one-twelfth of the Estimated Annual Tax, Insurance and Utility Charge. Landlord reserves the right to reasonably re-estimate and modify the Estimated Annual Tax, Insurance and Utility Charge by notice to Tenant once annually on the Additional Rent Adjustment Date (as defined in Section

4.2.4 hereof), and Tenant's payments shall thereupon be adjusted accordingly.

Not later than ninety (90) days after the end of each fiscal year during the Term and after Lease termination, Landlord shall render a statement in reasonable detail and according to usual accounting practices certified by Landlord and showing for the preceding fiscal year or fraction thereof, as the case may be, the actual Annual Tax, Insurance and Utility Charge for the said fiscal year or fraction thereof, and thereupon any balance owed by Tenant or excess paid by Tenant under this Section shall be paid to Landlord, or credited to Tenant, as the case may be, on the next rent payment date. As used herein, the term "Annual Tax, Insurance and Utility Charge" shall mean and refer to the amount of funds paid by Tenant pursuant to Section 4.2.1, 4.2.2 and 4.2.3 for the fiscal year in question for costs actually incurred by Landlord (without any mark-up for Landlord's overhead or profit). All payments under this Section shall to the extent thereof relieve Tenant of its obligations under said Sections 4.2.1, 4.2.2 and 4.2.3 hereof.

Landlord shall have the right from time to time to change the periods of accounting under this Section 4.2.5 to any annual period other than a fiscal year, and upon any such change all items referred to in this Section shall be appropriately apportioned. In all Landlord's annual statements rendered under this Section, amounts for periods partially within and partially without the accounting periods shall be appropriately apportioned, and any items which are not determinable at the time of such a statement shall be included therein on the basis of Landlord's estimate, and with respect thereto Landlord shall render promptly after determination a supplemental statement, and an appropriate adjustment shall be made according thereto. All of landlord's statements under this Section shall be prepared on an accrual basis of accounting.

Notwithstanding any other provision of this Section 4.2.5, if the Term expires or is terminated as of a date other than the last day of a fiscal year, then for such fraction of a fiscal year at the end of the Term, Tenant's last payment to Landlord under this Section 4.2.5 shall be made on the basis of Landlord's best estimate of the items otherwise includable in the annual statement rendered by Landlord under this Section and shall be made on or before the later of (a) 10 days after Landlord delivers such estimate to Tenant or (b) the last day of the Term, with an appropriate payment or refund to be made upon submission of Landlord's statement.

4.3 LATE PAYMENT OF RENT.

If any installment of rent is paid after the date the same was due, it shall bear interest from the due date at the higher of (i) the annual rate of interest payable by Landlord to its mortgagee(s) or (ii) the prime commercial rate of Fleet National Bank or its successor(s), as it may be adjusted from time to time, plus, in either case, 4% per annum, but in no event more than the highest rate of interest allowed by applicable law. Any amounts due under this
Section 4.3 shall be Additional Rent. The foregoing provisions of this Section
4.3 shall not apply to the first two installments of rent paid after the date the same were due during each twelve consecutive month period during the Term.

ARTICLE V

TENANT'S ADDITIONAL COVENANTS

5.1 AFFIRMATIVE COVENANTS.

Tenant covenants at its expense at all times during the Term and for such further time as Tenant occupies the Premises or any part thereof:

5.1.1 Perform Obligations.

To perform promptly all of the obligations of Tenant set forth in this Lease; and to pay when due the Fixed Rent and Additional Rent and all charges, rates and other sums which by the terms of this Lease are to be paid by Tenant.

5.1.2 Occupancy and Use.

Continuously from the Commencement Date, to use and occupy the Premises only for the Permitted Uses, and from time to time to procure all licenses and permits necessary therefor at Tenant's sole expense.

Without limitation, Tenant shall strictly comply with all federal, state, and municipal laws, ordinances, and regulations governing, and all Development Approvals, Subsequent Approvals and Title Exceptions applicable to, Tenant's particular use or manner of use of the Premises, and the generation, storage, containment and disposal of medical or hazardous waste. Tenant shall be solely responsible for

procuring and complying at all times with any and all necessary permits directly relating or incident to: the conduct of its activities on the Premises; its scientific experimentation, transportation, storage, handling, use and disposal of any chemical or radioactive or bacteriological or pathological substances or organisms or other hazardous wastes or environmentally dangerous substances or materials or medical waste. Within ten (10) days of a request by Landlord, which request shall be made not more than once during each period of twelve (12) consecutive months during the Term hereof, unless otherwise requested by any mortgagee of Landlord, Tenant shall furnish Landlord with copies of all such permits which Tenant possesses or has obtained together with a certificate certifying that such permits are all of the permits which Tenant possesses or has obtained with respect to the Premises. Tenant shall be entitled to redact any Confidential Information from the copies of such permits and accompanying certificates of Tenant. Tenant shall promptly give notice to Landlord of any warnings or violations relative to the above received from any federal, state, or municipal agency or by any court of law and shall promptly cure the conditions causing any such violations. Tenant shall not be deemed to be in default of its obligations under the preceding sentence to promptly cure any condition causing any such violation in the event that, in lieu of such cure, Tenant shall contest the validity of such violation by appellate or other proceedings permitted under applicable law, provided that:
(i) any such contest is made reasonably and in good faith, (ii) Tenant makes provisions, including, without limitation, posting bond(s) or giving other security, acceptable to Landlord to protect Landlord, the Building and the Lot from any liability, costs, damages or expenses arising in connection with such violation and failure to cure, (iii) Tenant shall agree to indemnify, defend (with counsel reasonably acceptable to Landlord) and hold Landlord harmless from and against any and all liability, costs, damages, or expenses arising in connection with such condition and/or violation, (iv) Tenant shall promptly cure any violation in the event that its appeal of such violation is overruled or rejected, and (v) Tenant shall certify to Landlord's satisfaction that Tenant's decision to delay such cure shall not result in any actual or threatened bodily injury or property damage to Landlord, any tenant or occupant of the Building or the Lot, or any other person or entity. Landlord agrees that any Confidential Information gained or obtained by Landlord pursuant to this Section 5.1.2 shall be kept confidential in accordance with Section 10.15 hereof.

5.1.3 Repair and Maintenance.

Except as otherwise provided in Article VI, to keep the Premises including, without limitation, all fixtures and equipment now or hereafter on the Premises, or exclusively serving the Premises, but excluding the exterior (exclusive of glass and doors) and structural

elements of the Building and the Building Common Areas and Complex Common Areas, which Landlord shall maintain and repair unless such repairs are required because of Tenant's willful misconduct or negligence, in good order, condition and repair and at least as good order, condition and repair as they are in on the Commencement Date or may be put in during the Term, reasonable use and wear only excepted; to keep in a safe, secure and sanitary condition all trash and rubbish temporarily stored at the Premises; and to make all repairs and replacements and to do all other work necessary for the foregoing purposes whether the same may be ordinary or extraordinary, foreseen or unforeseen. Tenant shall be responsible for heating and air-conditioning systems serving the Premises to the extent that such systems are not a part of Base Building Improvements, and Tenant shall secure, pay for and keep in force contracts with appropriate and reputable service companies providing for the regular maintenance of the heating and air-conditioning systems serving the Premises to the extent that such systems are not a part of Base Building Improvements, and copies of such contracts shall be furnished to Landlord. It is further agreed that the exception of reasonable use and wear shall not apply so as to permit Tenant to keep the Premises in anything less than suitable, tenantlike, and efficient and usable condition considering the nature of the Premises and the use reasonably made thereof, or in less than good and tenantlike repair.

5.1.4 Compliance with Law.

To make all repairs, alterations, additions or replacements to the Premises required by any law or ordinance or any order or regulation of any public authority other than major capital repairs, alterations, additions or replacements to the foundations and structural elements of the Building which are not required because of Tenant's failure to comply with the provisions of Section 5.1.3 hereof; to keep the Premises equipped with all safety appliances so required; to pay all municipal, county, or state taxes assessed against the leasehold interest hereunder, or against personal property of any kind on or about the Premises; and to comply with the orders and regulations of all governmental authorities with respect to zoning, building, fire, health and other codes, regulations, ordinances or laws applicable to the Premises.

Tenant shall not use, generate, manufacture, produce, handle, store, release, discharge or dispose of in, on, under or about the Premises or transport to or from the Premises, or allow its employees, agents, contractors, invitees or any other person or entity to do so, any oil, hazardous or toxic materials or hazardous or toxic wastes or medical waste (collectively, "hazardous materials") except to the extent that the following conditions regarding the use, generation, manufacture, production, handling, storing, releasing, discharging, disposal or transport (individually or collectively, the "Use") of hazardous materials shall be satisfied: (i) the Use shall be directly related to the operation of Tenant's business as permitted herein, (ii) Tenant shall first provide Landlord with the list of the types and quantities of such proposed hazardous materials which Tenant is required to furnish to the applicable governmental authorities for purposes of

compliance with the Resource Conservation and Recovery Act, as amended (42 U.S.C. ss. 9601, et seq.) (the "RCRA List") (or, in the event that the RCRA List ceases to be required to be filed under such law, a list containing the same information required to be listed on the RCRA List as of the date hereof), and shall update such list as necessary for continuing accuracy, and such other information reasonably satisfactory to Landlord as Landlord may reasonably require concerning such Use, and (iii) such Use shall be in strict compliance (at

Tenant's expense) with all applicable laws, regulations, licenses and permits. Landlord hereby covenants and agrees that the information contained in any list, or update thereof, referred to in the foregoing clause (ii) shall be kept confidential in accordance with Section 10.15 hereof. Notwithstanding the foregoing, Tenant hereby agrees to consult and coordinate with Landlord prior to transporting any hazardous materials to or from the Premises whenever (i) such transportation is not of the kind regularly made during the ordinary course of business by a person or entity operating a laboratory facility for the Permitted Uses or (ii) Tenant has reason to believe that such transportation may result in a public demonstration, protest or other similar disturbance at the Building, the Lot or the Complex. If the transportation, generation, manufacture, production, handling, release, storage, use or disposal of any hazardous materials anywhere on the Premises or in the Complex in connection with the Tenant's use of the Premises results in (1) contamination of the soil, surface or ground water or (2) loss or damage to person(s) or property, then Tenant agrees to respond in accordance with the following paragraph:

Tenant agrees (i) to notify Landlord immediately of any contamination, claim of contamination, loss or damage, (ii) after consultation and approval by Landlord, to clean up the contamination in full compliance with all applicable statutes, regulations and standards, and (iii) to indemnify, defend (with counsel acceptable to Landlord) and hold Landlord harmless from and against any claims, suits, causes of action, costs and fees, including attorneys' fees, arising from or connected with any such contamination, claim of contamination, loss or damage. No consent or approval of Landlord shall in any way be construed as imposing upon Landlord any liability for the means, methods, or manner of removal, containment or other compliance with applicable law for and with respect to the foregoing.

Tenant shall promptly notify Landlord upon Tenant's receipt of any inquiry, notice, or threat to give notice by any government authority or any other third party with respect to any hazardous materials. Notwithstanding the foregoing, Tenant shall not be liable to Landlord hereunder for any contamination, claim of contamination, loss or damage arising in connection with hazardous materials to the extent the same is the result of (A) hazardous materials existing in the Building and the Lot prior to Tenant's use or occupancy of the Premises, (B) migration of hazardous materials from any site onto the Lot not caused by Tenant, (C) the generation, manufacture, production, handling, release, storage, use or disposal of any hazardous materials at the Building or the Lot by Landlord, any other tenant or occupant, or any so-called "mid-night dumpers" or (D) the Use (as defined above in this Section) by any party other than Tenant of hazardous materials at the Building or the Lot after the date upon which Tenant has completely vacated the same, including removal of all of its property (to the extent permitted herein) and hazardous materials. Tenant's indemnification obligations under this Section shall survive the expiration or earlier termination of this Lease.

Prior to vacating the Premises at the expiration of the Term hereof, Tenant at its sole cost and expense shall provide Landlord with an environmental audit by a qualified environmental engineering firm satisfactory to Landlord, which audit shall include reasonable subsurface testing if requested by Landlord. The aforesaid environmental audit shall

affirmatively certify that the Premises are free from any and all contaminants, pollutants, radioactive materials, hazardous wastes or materials, medical waste, bacteriological agents or organisms which would render the Premises in violation of M.G.L. c. 21E, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. Section 9602 et seq., or any other applicable laws, rules, regulations or orders, as they may be amended or supplemented by administrative regulations, from time to time. Nothing herein contained shall be construed to limit or impair Tenant's obligation to comply with any law, code, rule or regulation which requires Tenant to notify any governmental authority or any other person concerning the Use (as defined above in this Section) of hazardous materials by Tenant at the Premises.

Tenant agrees that, with respect to the Premises, it shall be responsible for compliance with the Americans with Disabilities Act (42 U.S.C. ss. 12101 et seq.) and the regulations and Accessibility Guidelines for Buildings and Facilities issued pursuant thereto (collectively, the "ADA Requirements"), except to the extent that the Base Building Improvements are subject to ADA Requirements, in which event Landlord shall be responsible for compliance of the Base Building Improvements therewith. Tenant covenants and agrees that its use of the Premises shall not cause a discharge of more than its pro rata share on a square foot basis of the design flow gallonage per day of sanitary (non-industrial) sewage allowed under the sewage discharge permit(s) for the Building. Discharges in excess of that amount, and any discharge of industrial sewage, shall only be permitted if Tenant, at its sole expense, shall have obtained all necessary permits and licenses therefor, including without limitation permits from state and local authorities having jurisdiction thereof.

5.1.5 Tenant's Work.

To procure at Tenant's sole expense all necessary permits and licenses before Tenant undertakes any work on the Premises; to do all such work in compliance with the applicable provisions of Sections 3.2.1, 3.3 and 5.2.3 hereof; to do all such work in a good and workmanlike manner employing materials of good quality and so as to conform with all applicable zoning, environmental, building, fire, health and other codes, regulations, ordinances and laws and the ADA Requirements; to furnish to Landlord prior to the commencement of any such work, or any other such work for which the cost may reasonably be estimated to exceed $100,000, a bond or other security acceptable to Landlord assuring that any work commenced or continued by Tenant will be completed in accordance with specifications approved in advance in writing by Landlord; to keep the Premises at all times free of liens for labor and materials; to employ for such work one or more responsible contractors whose labor will work without interference with other labor working on the Premises; to require such contractors employed by Tenant to carry worker's compensation insurance in accordance with statutory requirements and comprehensive public liability insurance covering any general contractors on or about the Premises in amounts that at least equal the limits set forth in Section 1.1 and to submit certificates evidencing such coverage to Landlord prior to the commencement of such work; and to save Landlord harmless and indemnified from all injury, loss, claims or damage to any person or property occasioned by or growing out of such work. Notwithstanding any other provision of this Section 5.1.5 or any other provision of this Lease to the contrary, Landlord shall not, subject to applicable law, prohibit Tenant from using non-union labor to perform any work at the

Premises, including Tenant's Work. Without limitation of the foregoing, Landlord shall not require Tenant's employees to unionize.

5.1.6 Indemnity.

To defend, with counsel approved by Landlord, all actions against Landlord, any partner, trustee, stockholder, officer, director, employee or beneficiary of Landlord, holders of mortgages secured by the Premises or the Building and Lot and any other party having an interest in the Premises ("Indemnified Parties") with respect to, and to pay, protect, indemnify and save harmless, to the extent permitted by law, all Indemnified Parties from and against, any and all liabilities, losses, damages, costs, (including reasonable attorneys' fees and expenses), causes of action, suits, claims, demands or judgments of any nature arising from (i) injury to or death of any person, or damage to or loss of property, on the Premises or on adjoining streets or ways connected with the use or occupancy thereof by Tenant or its agents, contractors, licensees, employees, sublessees or invitees, unless and to the extent caused by the negligence of Landlord or its servants or agents, (ii) violation of this Lease by Tenant or its agents, contractors, licensees, employees, sublessees or invitees, or (iii) any act, fault, omission, or other misconduct of Tenant or its agents, contractors, licensees, employees, sublessees or invitees.

5.1.7 Landlord's Right to Enter.

To permit Landlord and its agents to enter into the Premises at reasonable times and upon at least 24 hours advance notice (except in case of emergency in which event no prior notice shall be required) to examine the Premises, make such repairs and replacements as Landlord may elect, without however, any obligation to do so except as may be otherwise expressly set forth in this Lease, and show the Premises to prospective purchasers and lenders, and, during the last twelve months of the Term, to show the Premises to prospective tenants and to keep affixed in suitable places notices of availability of the Premises. Landlord's right to enter the Premises in accordance with the foregoing shall be subject to Landlord's obligations pursuant to Section 10.15 hereof. Notwithstanding the foregoing, Landlord agrees that in the event that Landlord shows the Premises to any prospective purchaser or tenant, Landlord shall: (i) provide at least three (3) days' notice to Tenant identifying the prospective purchaser or tenant, (ii) only show the Premises to such purchaser or tenant if Landlord believes in good faith that such person or entity is a bona fide prospective purchaser or tenant, (iii) conduct such showing in compliance with such reasonable requests and instructions as Tenant may make for purposes of protecting Tenant's Confidential Information.

5.1.8 Personal Property at Tenant's Risk.

All of the furnishings, fixtures, equipment, effects and property of every kind, nature and description owned or leased by Tenant or by any person claiming by, through or under Tenant which, during the continuance of this Lease or any occupancy of the Premises by Tenant or anyone claiming under Tenant, may be on the Premises (collectively, "Tenant's Property"), shall, as between the parties, be at the sole risk and hazard of Tenant and if the whole or any part thereof shall be destroyed or damaged by fire, water or otherwise, or by the leakage or bursting of water pipes, steam pipes, or other pipes, by theft or from any other cause, no part

of said loss or damage is to be charged to or to be borne by Landlord, except that Landlord shall in no event be indemnified or held harmless or exonerated from any liability to Tenant or to any other person, for any injury, loss, damage or liability to the extent (i)

such injury, loss, damage or liability is the result of the negligence or willful misconduct of Landlord, its contractors, agents or employees, or (ii) such indemnification, agreement to hold harmless or exoneration is prohibited by law.

5.1.9 Payment of Landlord's Cost of Enforcement.

To pay on demand Landlord's expenses, including reasonable attorney's fees, incurred in enforcing any obligation of Tenant under this Lease or in curing any default by Tenant under this Lease as provided in Section 7.4.

5.1.10 Yield Up.

Subject to Section 3.2.1 hereof, at the expiration of the Term or earlier termination of this Lease: to surrender all keys to the Premises; to remove all of its trade fixtures and personal property in the Premises; to remove such installations and improvements made by Tenant as Landlord may request and all Tenant's signs and Tenant's telecommunications equipment wherever located, except that Tenant shall leave all cabling and wiring for its telecommunications equipment, but such cabling and wiring shall be appropriately and safely capped by Tenant; to repair all damage caused by such removal; and to yield up the Premises (including all installations and improvements made by Tenant except for trade fixtures and such of said installations or improvements as Landlord shall request Tenant to remove), broom-clean and in the same good order and repair in which Tenant is obliged to keep and maintain the Premises by the provisions of this Lease. Subject to Section 3.2.1 hereof, any property not so removed shall be deemed abandoned and may be removed and disposed of by Landlord in such manner as Landlord shall determine and Tenant shall pay Landlord the entire cost and expense incurred by Landlord in effecting such removal and disposition and in making any incidental repairs and replacements to the Premises and for use and occupancy during the period after the expiration of the Term and prior to Tenant's performance of its obligations under this Section
5.1.10. Tenant shall further indemnify Landlord against all loss, cost and damage resulting from Tenant's failure and delay in surrendering the Premises as above provided.

5.1.11 Estoppel Certificate.

Upon not less than 10 days' prior notice by Landlord, to execute, acknowledge and deliver to Landlord a statement in writing certifying that this Lease is unmodified and in full force and effect and that except as stated therein Tenant has no knowledge of any defenses, offsets or counterclaims against its obligations to pay the Fixed Rent and Additional Rent and any other charges and to perform its other covenants under this Lease (or, if there have been any modifications that the Lease is in full force and effect as modified and stating the modifications and, if there are any defenses, offsets or counterclaims, setting them forth in reasonable detail), the dates to which the Fixed Rent and Additional Rent and other charges have been paid and a statement that, to the best of Tenant's knowledge, Landlord is not in default hereunder (or if in default, the nature of such default, in reasonable detail) and such other matters reasonably

required by Landlord or any prospective purchaser or mortgagee of the Premises. Any such statement delivered pursuant to this Section 5.1.11 may be relied upon by any prospective purchaser or mortgagee of the Premises, or any prospective assignee of any such mortgage.

5.1.12 Landlord's Expenses Re: Consents.

To reimburse Landlord promptly on demand for all reasonable legal expenses incurred by Landlord in connection with all requests by Tenant for consent or approval under this Lease. Notwithstanding the foregoing, Tenant shall not be liable for any reasonable legal expenses incurred by Landlord for the first two (2) such requests made by Tenant during each period of twelve (12) consecutive calendar months during the Term.

5.1.13 Rules and Regulations.

To comply with the Rules and Regulations set forth in Exhibit C, as the same may be amended from time to time by Landlord to provide for the beneficial operation of the Building, the Lot and/or the Complex, provided that such amendments do not materially interfere with Tenant's right of use and enjoyment of the Premises pursuant to this Lease.

5.1.14 Loading.

Not to place Tenant's Property, as defined in Section 5.1.8, upon the Premises so as to exceed the floor load limits set forth in the Design Documents and not to move any safe, vault or other heavy equipment in, about or out of the Premises except in such manner and at such times as Landlord shall in each instance approve; Tenant's business machines and mechanical equipment which cause vibration or noise that may be detectable outside of the Building shall be placed or maintained by Tenant in settings of cork, rubber,

spring, or other types of vibration eliminators sufficient to reduce such vibration or noise to a level reasonably acceptable to Landlord.

5.1.15 Holdover.

To pay to Landlord (i) the greater of twice (a) the then fair market rent as reasonably determined by Landlord or (b) the total of the Fixed Rent, Additional Rent, and all other payments then payable hereunder, for each month or portion thereof Tenant shall retain possession of the Premises or any part thereof after the termination of this Lease, whether by lapse of time or otherwise, and (ii) all damages sustained by Landlord on account thereof; provided, however, that any payments made by Tenant under the foregoing clause (i) in excess of the then fair market rent for the Premises as so reasonably determined by Landlord shall be applied against any damages under the foregoing clause (ii). The provisions of this subsection shall not operate as a waiver by Landlord of the right of re-entry provided in this Lease.

5.2 NEGATIVE COVENANTS.

Tenant covenants at all times during the Term and for such further time as Tenant occupies the Premises or any part thereof:

5.2.1 Assignment and Subletting.

Not without the prior written consent of Landlord to assign this Lease, to make any sublease, or to permit occupancy of the Premises or any part thereof by anyone other than Tenant, voluntarily or by operation of law, except as hereinafter provided; as Additional Rent, to reimburse Landlord promptly for reasonable legal and other expenses incurred by Landlord in connection with any request by Tenant for consent to assignment or subletting (subject to the provisions of Section 5.1.12 hereof); no assignment or subletting shall affect the continuing primary liability of Tenant (which, following assignment, shall be joint and several with the assignee); no consent to any of the foregoing in a specific instance shall operate as a waiver in any subsequent instance. Landlord's consent to any proposed assignment or subletting is required both as to the terms and conditions thereof and as to the consistency of the proposed assignee's or subtenant's business with other uses and tenants in the Building. In addition, as to any assignee (but not as to any sublessee) Landlord's consent shall be required as to the reasonable creditworthiness of the proposed assignee in view of market conditions then prevailing for leases having terms and conditions comparable to this Lease. Landlord's consent to any assignment or subletting by Tenant shall not be unreasonably withheld, provided that Tenant is not then in default under this Lease and that such assignee or subtenant pays therefor the greater of the Fixed Rent, Additional Rent, and all other payments then payable hereunder, or the then fair market rent for the Premises. If Tenant requests Landlord's consent to assign this Lease or to sublet any portion of the Premises such that Tenant shall not occupy at least 50,000 r.s.f. of the Premises after the date of commencement of such sublease, Landlord shall have the option, exercisable by written notice to Tenant given within 10 days after receipt of such request, to terminate this Lease as of the date of commencement the proposed sublease or assignment; provided, however, that Tenant shall have the right to rescind any such request in the event Landlord elects to so terminate this Lease by notice given to Landlord within five (5) days after the date of such termination notice from Landlord, in which event such termination notice shall be of no further force or effect;

If, at any time during the Term of this Lease, Tenant is:

(i) a corporation or a trust (whether or not having shares of beneficial interest) and there shall occur any change in the identity of any of the persons then having power to participate in the election or appointment of the directors, trustees or other persons exercising like functions and managing the affairs of Tenant; or

(ii) a partnership or association or otherwise riot a natural person (and is not a corporation or a trust) and there shall occur any change in the identity of any of the persons who then are members of such partnership or association or who comprise Tenant;

Tenant shall so notify Landlord and Landlord may terminate this Lease by notice to Tenant given within 90 days thereafter if, in Landlord's reasonable judgment, the credit of Tenant is thereby impaired. This paragraph shall not apply if the initial Tenant named herein is a corporation and the outstanding voting stock thereof is listed on a recognized securities exchange.

Notwithstanding the foregoing provisions of this Section 5.2.1, Tenant may assign this Lease or sublet any portion of the Premises without Landlord's consent to (i) any successor of Tenant resulting from an acquisition of all or substantially all of Tenant's assets or a merger or consolidation of Tenant and
(ii) any Affiliate of Tenant (as hereinafter defined) whose net worth is equal to or greater than the net worth of Tenant as of the date hereof, provided that Tenant provides Landlord at least thirty (30) days prior notice of such assignment or subletting pursuant to either of the foregoing clauses (i) or
(ii). As used herein, the term "Affiliate of Tenant" shall mean and refer to any entity controlled by, controlling or under common

control with Tenant.

In the event that any assignee or subtenant pays to Tenant any amounts in excess of the Fixed Rent, Additional Rent, and all other payments then payable hereunder, or pro rata portion thereof on a square footage basis for any portion of the Premises (such excess being hereinafter referred to as "Sublease Profits"), Tenant shall promptly pay fifty percent (50%) of said Sublease Profits to Landlord as and when received by Tenant after deduction of Tenant's Sublease Costs (as hereinafter defined). The term "Sublease Costs" shall mean and refer to Tenant's reasonable legal, brokerage and construction costs and expenses incurred in good faith in view of the size and expected term of any applicable sublease or assignment. Sublease Costs shall be amortized over the term of the applicable sublease or assignment.

5.2.2 Nuisance.

Not to injure, deface or otherwise harm the Premises; nor commit any nuisance; nor permit the emission of any noise, vibration or odor which is contrary to any law or ordinance; nor make, allow or suffer any waste; nor make any use of the Premises which is improper, offensive or contrary to any law or ordinance or which will invalidate any of Landlord's insurance.

5.2.3 Installation, Alterations or Additions.

Subject to the provisions of Section 3.2.1, 3.3 and Section 5.1.5 hereof, not to make any installations, alterations, or additions in, to or on the Premises (including, without limitation, buildings, lawns, planted areas, walks, roadways, parking and loading areas, but expressly excluding the initial Tenant's Work, provided the same is approved by Landlord, such approval not to be unreasonably withheld or delayed), nor, except for Tenant's Work approved by Landlord, to permit the making of any apertures in the walls, partitions, ceilings or floors without on each occasion obtaining the prior written consent of Landlord and then only pursuant to plans and specifications approved by Landlord in advance in each instance.

ARTICLE VI

CASUALTY OR TAKING

6.1 DAMAGE BY FIRE.

In the event of loss of, or damage to, the Premises or the Building or the Garage by fire or other casualty, the rights and obligations of the parties hereto shall be as follows:

(a) (i) If the Premises, or any part thereof, shall be damaged by fire or other casualty, Tenant shall give prompt notice thereof to Landlord, and Landlord, upon receiving such notice, shall proceed promptly and with due diligence, subject to Force Majeure Events, to repair, or cause to be repaired, such damage except as otherwise provided herein. With respect to portions of the Building or Lot outside of the Premises that shall be damaged by fire or other casualty, Landlord shall proceed promptly and with due diligence, subject to Force Majeure Events, to repair, or to cause to be repaired, such damage after such damage occurs except as otherwise provided herein; and (ii) if the Garage, or any part thereof, shall be damaged by fire or other casualty and if the Garage is then owned by Landlord or an Affiliate of Landlord, Landlord shall cause the Garage Owner to proceed promptly and with due diligence, subject to Force Majeure Events, to repair or cause to be repaired, such damage except as otherwise provided herein. If Landlord or an Affiliate of Landlord is not the Garage Owner at the time of such damage by fire or other casualty, Landlord shall use all reasonable efforts to cause the Garage Owner to proceed promptly to repair such damage.

(b)(i) If the Premises, or any part thereof, shall be rendered untenantable by reason of such damage, whether to the Premises or to the Building or if such damage materially interferes with Tenant's access to the Premises, Annual Fixed Rent and Additional Rent shall proportionately (i.e., based on rentable square footage) abate for that portion of the Premises which is untenantable for the period from the date of such damage or from the date when material interference with Tenant's access due to such damage commences to the date when such damage shall have been repaired or such access shall have been restored, as applicable; and (ii) if the Garage or any part thereof shall be rendered untenantable by reason of such damage or if such damage prevents Tenant's access to the Garage then to the extent that Landlord does not provide Tenant with substitute parking spaces in the Complex or within 1,000 feet of the Premises ("Substitute Parking Spaces"), the Parking Fee (as defined in Section 10.14) shall proportionately abate (based upon the number of Tenant's Parking Spaces for each of the Garage Parking Spaces (as defined in Section 10.14) in excess of the Substitute Parking Spaces which are unavailable to Tenant for the period from the date of such damage or from the date when access to the Garage ceases due to such damage to the date when such damage shall have been repaired or such access shall have been restored, as applicable.

(c)(i) If, as a result of fire or other casualty, the whole or a substantial part of the Building is rendered untenantable, Landlord, within

ninety (90) days from the date of such fire or casualty, may terminate this Lease by notice to Tenant, specifying a date not less than twenty (20) nor more than forty (40) days after the giving of such notice on which the Term of this Lease shall terminate. If Landlord does not so elect to terminate this Lease, then Landlord shall proceed with diligence to repair the damage to the Building and Premises and all facilities serving the same, and the Annual Fixed Rent and Additional Rent shall meanwhile proportionately abate, all as provided in Paragraph (b)(i) of this Section 6.1. Landlord within one hundred twenty (120) days after the fire or other casualty shall notify Tenant in writing whether or not, in its reasonable judgment, the Building and the Premises can be restored to substantially their condition prior to such damage and Utility Services restored to the Utility Switching Points within twelve (12) months of the date of the casualty. If such notification shall state that such restoration cannot be so accomplished, then Tenant may terminate this Lease within thirty (30) days from Tenant's receipt of such notification. Furthermore, if Tenant does not so terminate this Lease and if such damage is not repaired, Utility Services are not restored

and the Premises and the remainder of the Building are not restored to substantially the same condition as they were prior to such damage within twelve
(12) months from the date of such damage, Tenant within thirty (30) days from the expiration of such twelve (12) month period or from the expiration of any extension thereof by reason of Force Majeure Events (the "Casualty Restoration Completion Date"), may terminate this Lease by notice to Landlord, specifying a date not more than forty-five (45) days after the giving of such notice on which the term of this Lease shall terminate. The period within which the required repairs may be accomplished shall be extended by the number of days lost as a result of Force Majeure Events, provided however that such period shall in no event be extended beyond six (6) months from the Casualty Restoration Completion Date. Substantial part for purposes of this Section 6.1(c)(i) and Section 6.1(d) shall mean fifty percent (50%) or more of the Building; and (ii) if as a result of fire or other casualty, the whole or a substantial part of the Garage is rendered untenantable, Landlord, within ninety (90) days from the date of such fire or casualty, shall notify Tenant whether the Garage Owner will repair the damage to the Garage. If the Garage Owner is unwilling to repair such damage and Landlord does not provide substitute parking in the Complex or within 1,000 feet of the Premises, then Tenant may terminate this Lease by notice to Landlord, specifying a date not less than twenty (20) nor more than forty (40) days after the giving of such notice on which the Term of this Lease shall terminate. "Substantial part" for this Section 6.1(c)(ii) shall mean fifty percent (50%) or more of Tenant's Parking Spaces.

If Tenant fails to terminate in accordance within the foregoing time periods set forth in this Section 6.1, Tenant shall have waived its right to terminate.

(d) If a substantial part of the Premises shall be rendered untenantable by fire or other casualty during the last eighteen (18) months of the then current Term of this Lease and Tenant has not exercised an Option to Extend (as set forth in Section 10.12 hereof), Landlord may terminate this Lease effective as of the date of such fire or other casualty upon notice to Tenant given within sixty (60) days after such fire or other casualty.

(e) With respect to Sections 6.1 and 6.2 hereof, Landlord shall not be required to repair or replace any of Tenant's trade fixtures, business machinery, equipment, cabinet work, furniture, personal property or other installations or improvements not originally installed by Landlord or otherwise required to be insured by Tenant under the terms of this Lease, or any damage to the Premises or Building caused by Tenant, or any damage to the Premises or Building not covered by insurance proceeds or condemnation proceeds, or any damage or destruction which Landlord is unable to restore due to Landlord's inability, after exercising reasonable and diligent efforts, to obtain final approval therefor from applicable governmental authorities, and no damages, compensation or claim shall be payable by Landlord for inconvenience, loss of business or annoyance arising from any repair or restoration of any portion of the Premises or of the Building.

(f) The provisions of this Section 6.1 shall be considered an express agreement governing any instance of damage or destruction of the Building, the Premises or the Garage by fire or other casualty, and any law now or hereafter in force providing for such contingency in the absence of express agreement shall have no application.

(g) In the event of any termination of this Lease pursuant to this
Section 6.1, the Term of this Lease shall expire as of the effective termination date as fully and completely as if such date were the date herein originally scheduled as the Term Expiration Date; provided that Landlord shall within thirty (30) days thereafter refund any prepaid Rent.

(h) Landlord's architect's certificate, given in good faith, shall be deemed conclusive of the statements therein contained and binding upon Tenant with respect to the extent of the damage to the Building and the performance and completion of any repair or restoration work undertaken by Landlord pursuant to Sections 6.1 or 6.2 hereof. Tenant may have Tenant's architect verify the statements included within such certificate within five (5) days after Tenant's receipt thereof.

6.2 CONDEMNATION.

In the event that the whole or any substantial part of the Building shall be taken or appropriated by eminent domain or shall be condemned for any public or quasi-public use, or (by virtue of any such taking, appropriation or condemnation) shall suffer any damage (direct, indirect or consequential) for which Landlord or Tenant shall be entitled to compensation, then (and in any such event) this Lease and the Term hereof may be terminated at the election of Landlord by a notice in writing of its election so to terminate which shall be given by Landlord to Tenant within ninety (90) days following the date on which Landlord shall have received notice of such taking, appropriation or condemnation. In the event that a substantial part of the Premises or of the means of access thereto or of the Garage Parking Spaces (as such term is defined in Section 10.14 hereof) (unless replaced without undue delay by substitute facilities within 1,000 feet of the Building) shall be so taken, appropriated or condemned so as to substantially interfere with the Permitted Uses of the Premises, then this Lease and the Term hereof may be terminated at the election of Tenant by a notice in writing of its election so to terminate which shall be given by Tenant to Landlord within sixty (60) days following the date on which Tenant shall have received notice of such taking, appropriation or condemnation. Substantial part for purposes of this Section 6.2 shall mean fifty percent (50%) or more of the Premises or fifty percent (50%) or more of the Garage Parking Spaces, as applicable.

Upon giving of any such notice of termination (either by Landlord or Tenant), this Lease and the Term hereof shall terminate as of the date on which Tenant shall be required to vacate any part of the Premises or shall be deprived of a substantial part of the means of access thereto. In the event of any such termination, this Lease and the Term hereof shall expire as of the effective termination date as fully and completely as if such date were the date herein originally scheduled as the Term Expiration Date. If neither party elects to terminate, Landlord will with reasonable diligence and at Landlord's expense, restore the remainder of the Premises and Building, or the remainder of the means of access and Garage Parking Spaces, to substantially the same condition as practicable as existed prior to such taking, appropriation or condemnation in which event a just proportion of the Annual Fixed Rent and Additional Rent, according to the nature and extent of the taking, appropriation or condemnation and the resultant injury sustained by the Premises and the means of access thereto, shall be abated until what remains of the Premises and the means of access thereto shall have been restored as fully as may be for permanent use and occupancy by Tenant hereunder. In the event of any taking of the Premises or any part thereof for temporary use, (i) this Lease shall be and remain unaffected thereby, and

(ii) Tenant shall be entitled to receive for itself any award made for such use, provided, that if any taking is for a period extending beyond the Term of this Lease, such award shall be apportioned between Landlord and Tenant as of the Term Expiration Date.

6.3 AWARD.

Irrespective of the form in which recovery may be had by law, all rights to damages or compensation payable pursuant to Section 6.2 shall belong to Landlord in all cases except as set forth in Section 6.2 hereof or below in this
Section 6.3. Tenant hereby grants to Landlord all of Tenant's rights to such damages and compensation and covenants to deliver such further assignments thereof as Landlord may from time to time request. It is agreed and understood, however, that Landlord does not reserve to itself, and Tenant does not assign to Landlord, any damages payable for (i) movable trade fixtures or any items listed on Exhibit E hereto installed by Tenant or anyone claiming under Tenant, at its own cost and expense or (ii) relocation expenses or damages for loss of business
(in excess of any such damages attributable to the value of this lease)
recoverable by Tenant from such authority in a separate action.

ARTICLE VII

DEFAULTS

7.1 EVENTS OF DEFAULT.

(a) If Tenant shall default in the performance of any of its obligations to pay the Fixed Rent or Additional Rent hereunder and if such default shall continue for 10 days after notice from Landlord to Tenant (provided, however, that Landlord shall not be required to provide such notice more than two (2) times in any period of twelve (12) consecutive calendar months) or if within thirty (30) days after notice from Landlord to Tenant specifying any other default or defaults Tenant has not commenced diligently to correct the default or defaults so specified or has not thereafter diligently pursued such correction to completion, or (b) if any assignment for the benefit of creditors shall be made by Tenant, or by any guarantor of Tenant, or (c) if Tenant's leasehold interest shall be taken on execution or other process of law in any action against Tenant, or (d) if a lien or other involuntary encumbrance is filed against Tenant's leasehold interest, and is not discharged within thirty
(30) days thereafter, or (e) if a petition is filed by Tenant or any guarantor of Tenant for liquidation, or for reorganization or an

arrangement or any other relief under any provision of the Bankruptcy Code as then in force and effect, or (f) if an involuntary petition under any of the provisions of said Bankruptcy Code is filed against Tenant or any guarantor of Tenant and such involuntary petition is not dismissed within ninety (90) days thereafter, or (g) if Tenant fails to maintain the insurance required under Section 4.2.2.1 hereof, or (h) if Tenant fails to substantially complete Tenant's Work required for the initial occupancy of the percentages of the Premises by Tenant specified in Section
3.2.1 hereof by the respective dates determined pursuant to Section 3.2.1 hereof, Tenant shall have a six-month cure period after notice from Landlord to Tenant within which to substantially complete such percentages of the Premises (the foregoing events described in clauses (a) through (h) being individually referred to as an "Event of Default" and collectively as "Events of Default"), then, and upon any Event of Default, Landlord and the agents and servants of Landlord lawfully may, in addition to and not in derogation of any remedies for any preceding breach of covenant, immediately or at

any time thereafter and without demand or notice, at Landlord's election, do any one or more of the following: (1) give Tenant written notice stating that the Lease is terminated, effective upon the giving of such notice or upon a date stated in such notice, as Landlord may elect, in which event the Lease shall be irrevocably extinguished and terminated as stated in such notice without any further action, or (2) with or without process of law, in a lawful manner and without illegal force, enter and repossess the Premises as of Landlord's former estate, and expel Tenant and those claiming through or under Tenant, and remove its and their effects, without being guilty of trespass, in which event the Lease shall be irrevocably extinguished and terminated at the time of such entry, or (3) pursue any other rights or remedies permitted by law. Any such termination of the Lease shall be without prejudice to any remedies which might otherwise be used for arrears of rent or prior breach of covenant, and in the event of such termination Tenant shall remain liable under this Lease as hereinafter provided. Tenant hereby waives all statutory rights of redemption and Landlord, without notice to Tenant, may store Tenant's effects, and those of any person claiming through or under Tenant, at the expense and risk of Tenant, and, if Landlord so elects, may sell such effects at public auction or private sale and apply the net proceeds to the payment of all sums due to Landlord from Tenant, if any, and pay over the balance, if any, to Tenant.

7.2 REMEDIES.

In the event that this Lease is terminated under any of the provisions contained in Section 7.1 or shall be otherwise terminated for breach of any obligation of Tenant, Tenant covenants to pay forthwith to Landlord, as compensation, the excess of the total rent reserved for the residue of the Term over the fair market rental value of the Premises for said residue of the Term. In calculating the rent reserved there shall be included, in addition to the Fixed Rent and Additional Rent, the value of all other considerations agreed to be paid or performed by Tenant during said residue. Tenant further covenants (as additional and cumulative obligations) after any such termination to pay punctually to Landlord all the sums and to perform all the obligations which Tenant covenants in this Lease to pay and to perform in the same manner and to the same extent and at the same time as if this Lease had not been terminated. In calculating the amounts to be paid by Tenant pursuant to the next preceding sentence Tenant shall be credited with any amount paid to Landlord as compensation as in this Section 7.2 provided and also with the net proceeds of any rent obtained by Landlord by reletting the Premises, after deducting all of the Landlord's reasonable expenses in connection with such reletting, including, without limitation, all repossession costs, brokerage commissions, fees for legal services and expenses of preparing the Premises for such reletting, it being agreed by Tenant that Landlord may (i) relet the Premises or any part or parts thereof, for a term or terms which may at Landlord's option be equal to or less than or exceed the period which would otherwise have constituted the balance of the Term and may grant such concessions and free rent as Landlord in its reasonable judgment considers advisable or necessary to relet the same and (ii) make such alterations, repairs and decorations in the Premises as Landlord in its reasonable judgment considers advisable or necessary to relet the same, and no action of Landlord in accordance with the foregoing or failure to relet or to collect rent under reletting shall operate or be construed to release or reduce Tenant's liability as aforesaid.

In lieu of any other damages or indemnity and in lieu of full recovery by Landlord of all sums payable under all the foregoing provisions of this Section
7.2, Landlord may by notice to Tenant, at any time after this Lease is terminated under any of the provisions contained in Section 7.1 or is otherwise terminated for breach of any obligation of Tenant and before such full recovery, elect to recover, and Tenant shall thereupon pay, as liquidated damages, an amount equal to the aggregate of the Fixed Rent and Additional Rent accrued in the 12 months ended next prior to such termination, plus the amount of rent of any kind accrued and unpaid at the time of termination and less the amount of any recovery by Landlord under the foregoing provisions of this Section 7.2 up to the time of payment of such liquidated damages.

Nothing contained in this Lease shall, however, limit or prejudice the right of Landlord to prove for and obtain in proceedings for bankruptcy or insolvency by reason of the termination of this Lease, an amount equal to the maximum allowed by any statute or rule of law in effect at the time when, and governing the proceedings in which, the damages are to be proved, whether or not the amount be greater than, equal to, or less than the amount of the loss or damages referred to above.

7.3 REMEDIES CUMULATIVE.

Any and all rights and remedies which either Landlord or Tenant may have under this Lease, and at law and equity, shall be cumulative and shall not be deemed inconsistent with each other, and any two or more of all such rights and remedies may be exercised at the same time insofar as permitted by law.

7.4 LANDLORD'S RIGHT TO CURE DEFAULTS.

Landlord may, but shall not be obligated to, cure, at any time, following 10 days' prior notice to Tenant, except in cases of emergency when no notice shall be required, any default by Tenant under this Lease; and whenever Landlord so elects, all costs and expenses incurred by Landlord, including reasonable attorneys' fees, in curing a default shall be paid by Tenant to Landlord as Additional Rent on demand, together with interest thereon at the rate provided in Section 4.3 from the date of payment by Landlord to the date of payment by Tenant.

7.5 EFFECT OF WAIVERS OF DEFAULT.

Any consent or permission by Landlord or Tenant to any act omission by the other party which otherwise would be a breach of any covenant or condition herein, or any waiver by Landlord or Tenant of the breach of any covenant or condition herein by the other party, shall not in any way be held or construed (unless expressly so declared) to operate so as to impair the continuing obligation of any covenant or condition herein, or otherwise, except as to the specific instance, operate to permit similar acts or omissions.

The failure of Landlord or Tenant to seek redress for violation of, or to insist upon the strict performance of, any covenant or condition of this Lease by the other party shall not be deemed a waiver of such violation nor prevent a subsequent act, which would have originally constituted a violation, from having all the force and effect of an original violation. The receipt

by Landlord, or the payment by Tenant, as the case may be, of rent with knowledge of the breach of any covenant of this Lease shall not be deemed to have been a waiver of such breach by Landlord or Tenant, as the case may be. No consent or waiver, express or implied, by Landlord or Tenant, as the case may be, to or of any breach of any agreement or duty shall be construed as a waiver or consent to or of any other breach of the same or any other agreement or duty.

7.6 NO ACCORD AND SATISFACTION.

No acceptance by Landlord of a lesser sum than the Fixed Rent, Additional Rent or any other charge then due shall be deemed to be other than on account of the earliest installment of such rent or charge due, unless Landlord elects by notice to Tenant to credit such sum against the most recent installment due, nor shall any endorsement or statement on any check or any letter accompanying any check or payment as rent or other charge be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such installment or pursue any other remedy in this Lease provided.

ARTICLE VIII

MORTGAGES

8.1 RIGHTS OF MORTGAGE HOLDERS.

The word "mortgage" as used herein includes mortgages, deeds of trust or other similar instruments evidencing other voluntary liens or encumbrances, and modifications, consolidations, extensions, renewals, replacements and substitutes thereof. The word "holder" shall mean a mortgagee, and any subsequent holder or holders of a mortgage. Until the holder of a mortgage shall enter and take possession of the Premises for the purpose of foreclosure, such holder shall have only such rights of Landlord as are necessary to preserve the integrity of this Lease as security. Upon entry and taking possession of the Premises for the purpose of foreclosure, such holder shall have all the rights of Landlord. Notwithstanding any other provision of this Lease to the contrary, including without limitation Section 10.5, no such holder of a mortgage shall be liable either as mortgagee or as assignee to perform, or be liable in damages for failure to perform, any of the obligations of Landlord unless and until such holder shall enter and take possession of the Premises for the purpose of foreclosure, and such holder shall not in any event be liable to perform or for failure to perform the obligations of Landlord under Section 3.1. Upon entry for the purpose of foreclosure, such holder shall be liable to perform all of the obligations of Landlord (except for the obligations under Article III), subject to and with the benefit of the provisions of Section 10.5, provided that a discontinuance of any foreclosure proceeding shall be deemed a conveyance under said provisions to the owner of the equity of the Premises. No Fixed Rent, Additional Rent or any other charge shall be paid more than 10 days prior to the due dates thereof and payments made in

violation of this provision shall (except to the extent that such payments are actually received by a mortgagee in possession or in the process of foreclosing its mortgage) be a nullity as against such mortgagee and Tenant shall be liable for the amount of such payments to such mortgagee.

The covenants and agreements contained in this Lease with respect to the rights, powers and benefits of a holder of a mortgage (including, without limitation, the covenants and agreements contained in this Section 8.1) constitute a continuing offer to any person, corporation or other entity, which by accepting a mortgage subject to this Lease, assumes the obligations herein set forth with respect to such holder; such holder is hereby constituted a party of this Lease as an obligee hereunder to the same extent as though its name were written hereon as such; and such holder shall be entitled to enforce such provisions in its own name. Tenant agrees on request of Landlord to execute and deliver from time to time a Subordination, Non-disturbance and Attornment Agreement ("SNDA"), substantially in the form of Exhibit D hereto or any other agreement which may be necessary to implement the provisions of this Section 8.1 and Section 8.2 hereof.

8.2 SUPERIORITY OF LEASE; OPTION TO SUBORDINATE.

This Lease shall be superior to and shall not be subordinate to any future mortgage or other voluntary lien or other encumbrance of the Lot, the Building or the Complex; provided, however, that Landlord shall have the option to subordinate this Lease to any such mortgage of the Lot, Building or Complex provided that Landlord obtains from the holder of record of any existing or future mortgage an SNDA in the form of Exhibit D hereto or another form of agreement with Tenant by the terms of which such holder will agree (a) to recognize the rights of Tenant under this Lease, (b) to perform Landlord's obligations hereunder arising after the date of such holder's acquisition of title as hereinafter described, expressly excluding, however, Landlord's obligations under Article III of this Lease, and (c) to accept Tenant as tenant of the Premises under the terms and conditions of this Lease in the event of acquisition of title by such holder through foreclosure proceedings or otherwise, provided that Tenant will agree to recognize the holder of such mortgage as Landlord in such event, which agreement shall be made expressly to bind and inure to the benefit of the successors and assigns of Tenant and of the holder and upon anyone purchasing said Premises at any foreclosure sale. Tenant and Landlord agree to execute and deliver any appropriate instruments necessary to carry out the agreements contained in this Section 8.2. Any such mortgage to which this Lease shall subordinate may contain such terms, provisions and conditions as the holder deems usual or customary.

8.3 LEASE AMENDMENTS.

Tenant agrees to make such changes in this Lease as may be reasonably required by the holder of any mortgage of which the Premises are a part, or any institution which may purchase all or a substantial part of Landlord's interest in the Premises, provided that such changes may not increase the Fixed Rent or other payments due hereunder or otherwise materially affect the obligations of Tenant hereunder, and provided further that such changes do not (i) materially interfere with Tenant's right of use and enjoyment of the Premises pursuant to this Lease, (ii) limit, impair or delay Tenant's rights to sublease or assign all or portion of this Lease pursuant to Section 5.2.1 hereof, (iii) limit, impair or delay Tenant's right to obtain a reduction or abatement of rent pursuant to Section 6.2, (iv) limit, impair or delay Tenant's right to terminate this Lease pursuant to Section 3.2 or Section 6.2 or (v) otherwise unreasonably limit, impair or delay Tenant's rights hereunder.

ARTICLE IX

LANDLORD'S ADDITIONAL COVENANTS

9.1 AFFIRMATIVE COVENANTS. Landlord covenants at all times during the Term:

9.1.1 Perform Obligations.

To perform promptly all of the obligations of Landlord set forth in this Lease, including, without limitation, furnishing, through Landlord's employees or independent contractors, the services (the cost of which is to be included in the Annual Maintenance Charge).

9.1.2 Repairs.

Except as otherwise provided in Article VI, to make such repairs (the cost of which is to be included in the Annual Maintenance Charge) to the roof, exterior walls, exterior windows and waterproofing, floor slabs, other structural components, parking areas, walks, landscaping, courtyard and any other common areas and facilities of the Building as may be necessary to keep them in good, serviceable and neat condition. Landlord shall be responsible for the maintenance and repair of the heating and air-conditioning systems and the components thereof serving the Building to the extent that such systems and components are included in Base

Building Improvements.

9.1.3 Compliance with Law.

To make all repairs, alterations, additions or replacements to the Building or the Lot (the costs of which are to be included in the Annual Maintenance Charge) required by any law, ordinance or order or regulation of any public authority including repairs, alterations, additions or replacements to the foundations and structural elements of the Building, except as required because of Tenant's failure to comply with the provisions of Section 5.1.3 hereof; to keep the Building equipped with all safety appliances so required (the costs of which are to be included in the Annual Maintenance Charge); subject to Section 4.2.1, to pay all municipal, county, or state taxes assessed against the Building or the Lot, or against Landlord's personal property of any kind on or about the Building or the Lot; and to comply with the orders and regulations of all governmental authorities with respect to zoning, building, fire, health and other codes, regulations, ordinances or laws applicable to the Building or the Lot, including the ADA Requirements (as defined in Section 5.1.4 hereof) and any codes, regulations, ordinances or laws relating to hazardous materials (as defined in Section 5.1.4), subject to, and without limitation of, Tenant's obligations with respect to such codes, regulations, ordinances or laws. The costs incurred by Landlord in connection with the foregoing compliance obligations shall be included in the Annual Maintenance Charge. All of the foregoing covenants and obligations are subject to, and without limitation of, all of Tenant's obligations under this Lease, including, without limitation, those set forth in Sections 4.2 and 5.1.4.

9.1.4 Indemnity.

To defend, with counsel reasonably approved by Tenant, all actions against Tenant, any partner, trustee, stockholder, officer, director, employee or beneficiary of Tenant ("Tenant's Indemnified Parties") with respect to, and to pay, protect, indemnify and save harmless, to the extent permitted by law, all Tenant's Indemnified Parties from and against any and all liabilities, losses, damages, costs, expenses (including reasonable attorneys' fees and expenses), causes of action, suits, claims, demands or judgments of any nature to which any of Tenant's Indemnified Parties is subject arising from and to the extent of any negligent or willful act, fault, omission, or other misconduct of Landlord or its agents, contractors or employees.

9.1.5 Estoppel Certificate.

Upon not less than 10 days' prior notice by Tenant, to execute, acknowledge and deliver to Tenant a statement in writing certifying that this Lease is unmodified and in full force and effect and that except as stated therein Landlord has no knowledge of any defenses, offsets or counterclaims against its obligations under this Lease (or, if there have been any modifications that the Lease is in full force and effect as modified and stating the modifications and, if there are any defenses, offsets or counterclaims, setting them forth in reasonable detail), the dates to which the Fixed Rent and Additional Rent and other charges have been paid and a statement that, to the best of Landlord's knowledge, Tenant is not in default hereunder (or if in default, the nature of such default, in reasonable detail) and such other matters reasonably required by Tenant or any prospective assignee of Tenant. Any such statement delivered pursuant to this Section 9.1.5 may be relied upon by any prospective assignee.

9.1.6 Subdivision.

The Lot is currently a portion of the Complex and on or before September 1, 2001 Landlord shall subdivide the Complex so as to, inter alia, establish the Lot as a separate taxable parcel and establish easements which benefit and/or burden the Lot and remaining portions of the Complex (collectively, the "Subdivision"). Upon or after the Subdivision, Landlord may convey the Lot and assign this Lease to an Affiliate of Landlord (the "Transfer"). Tenant agrees to cooperate with Landlord in connection with such Subdivision and Transfer, including without limitation, the execution, acknowledgment and delivery of an instrument pursuant to which this Lease shall be subordinated to easements reasonably established in connection with the Subdivision and Transfer and such other documents as Landlord reasonably may request so long as such Subdivision and Transfer do not materially interfere with Tenant's use of the Premises or any of Tenant's rights under this Lease to other portions of the Complex. Landlord represents and warrants that currently there is no mortgage on the Premises.

9.1.7 Utilities.

Subject to Section 4.2.3 hereof, to bring (or cause to brought) Utility Services for the Premises to the Utility Switching Points at Landlord's sole cost and expense.

ARTICLE X

MISCELLANEOUS PROVISIONS

10.1 NOTICES FROM ONE PARTY TO THE OTHER.

All notices required or permitted hereunder shall be in writing and addressed, if to the Tenant, at the Original Address of Tenant or such other address as Tenant shall have last designated by notice in writing to Landlord and, if to Landlord, at Landlord's Address or such other address as Landlord shall have last designated by notice in writing to Tenant. Any notice shall be deemed duly given if mailed to such address postage prepaid, registered or certified mail, return receipt requested, when deposited with the U.S. Postal Service, or if delivered by a recognized courier service (e.g. Federal Express) when deposited with such courier service, or if delivered to such address by hand, when so delivered.

10.2 QUIET ENJOYMENT.

Landlord agrees that upon Tenant's paying the rent and performing and observing the terms, covenants, conditions and provisions on its part to be performed and observed, Tenant shall and may peaceably and quietly have, hold and enjoy the Premises during the Term without any manner of hindrance or molestation from Landlord or anyone claiming under Landlord, subject, however, to the terms of this Lease.

10.3 EASEMENTS; CHANGES TO LOT LINES.

Landlord reserves the right, from time to time, to grant easements affecting the Premises or the Building, the Lot or the Complex and to change or alter existing boundaries of the Lot for purpose of developing and using the Lot so long as such easements or such changes or alterations to existing boundaries of the Lot do not materially interfere with Tenant's use of the Premises, and to enter upon the Premises for purposes of constructing and maintaining any pipes, wires and other facilities serving any portion of the Lot, the Building or the Complex, subject to the terms of Section 5.1.7 hereof.

10.4 LEASE NOT TO BE RECORDED.

Neither party shall record this Lease. Both parties shall execute and deliver a notice of this Lease in such form, if any, as may be permitted by applicable statute, which notice shall include provisions with respect to Tenant's Parking Spaces in the Garage and Tenant's right to use the Complex Common Areas. If this Lease is terminated before the Term Expiration Date the parties shall execute, deliver and record an instrument acknowledging such fact and the actual date of termination of this Lease, and Tenant hereby appoints Landlord its attorney-in-fact, coupled with an interest, with full power of substitution to execute such instrument.

10.5 BIND AND INURE; LIMITATION OF LANDLORD'S LIABILITY.

The obligations of this Lease shall run with the land, and this Lease shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. No owner of the Premises shall be liable under this Lease except for breaches of Landlord's obligations occurring while owner of the Premises. The obligations of Landlord shall be binding upon the assets of Landlord which comprise the Premises, the Building and the Lot but not upon other assets of Landlord. Without limiting the generality of the foregoing, upon any assignment of this Lease and the Security Deposit by Kendall Square, LLC to an Affiliate of Landlord or a third party, Kendall Square, LLC shall have no further liability or obligation arising pursuant to this Lease after the date of such assignment. No member, partner, trustee, stockholder, officer, director, employee or beneficiary (or the members, partners, trustees, stockholders, officers, directors or employees of any such member) of Landlord shall be personally liable under this Lease and Tenant shall look solely to Landlord's interest in the Premises, the Building and the Lot in pursuit of its remedies upon an event of default hereunder, and the general assets of the members, partners, trustees, stockholders, officers, directors, employees or beneficiaries (and the members, partners, trustees, stockholders, officers, directors or employees of any such member) of Landlord shall not be subject to levy, execution or other enforcement procedure for the satisfaction of the remedies of Tenant; provided that the foregoing provisions of this sentence shall not constitute a waiver of any obligation evidenced by this Lease and provided further that the foregoing provisions of this sentence shall not limit the right of Tenant to name Landlord or any member thereof as party defendant in any action or suit in connection with this Lease so long as no personal money judgment shall be asked for or taken against any such member or any individual partner, trustee, stockholder, officer, employee or beneficiary of Landlord or any such member.

10.6 FORCE MAJEURE.

In any case where either party hereto is required to do any act, delays caused by or resulting from the occurrence of one or more Force Majeure Events shall not be counted in determining the time during which work shall be completed, whether such time be designated by a fixed date, a fixed time or a "reasonable time", and such time shall be deemed to be extended by the period of such delay.

10.7 LANDLORD'S DEFAULT.

Landlord shall not be deemed to be in default in the performance of any of its obligations hereunder unless it shall fail to perform such obligations and such failure shall continue for a period of 30 days following receipt of notice from Tenant or such additional time as is reasonably required to correct any such default after notice has been given by Tenant to Landlord specifying the nature of Landlord's alleged default. Landlord shall not be liable in any event for incidental or consequential damages to Tenant by reason of any default by Landlord hereunder, whether or not Landlord is notified that such damages may occur. Except as expressly set forth in Section 3.2 and Section 6.2 hereof, Tenant shall have no right to terminate this Lease for any default by Landlord hereunder and no right, for any such default, to offset or counterclaim against any rent due hereunder.

Notwithstanding the foregoing, if any repairs to the Premises required by this Lease or any maintenance, cleaning, or lighting of Building Common Areas are not performed by Landlord within thirty (30) days after notice from Tenant (or such longer period as may be reasonably required in the event that any such repair, maintenance, cleaning or lighting cannot be completed within said thirty (30) day period), Tenant shall have the right to perform such obligation of Landlord. If Tenant performs any such obligation of Landlord, Landlord shall pay to Tenant the reasonable cost thereof within thirty (30) days after notice from Tenant, provided, however, that in no event shall Tenant have the right to offset or deduct the amount thereof against any payment of rent due hereunder.

If an emergency occurs where a repair is required to be done immediately in order to avoid imminent danger to persons or material damage to the Premises, Tenant shall have the right to self-help consistent with the immediately preceding grammatical paragraph of this Section 10.7 after giving Landlord only such notice as is reasonable under the circumstances, provided, however, that formal notice shall be promptly given thereafter. However, the right of self-help afforded to Tenant in this Section 10.7 shall be carefully and judiciously exercised by Tenant, it being understood and agreed that except in the case of an emergency, Landlord shall be given sufficient opportunity to take the action required of Landlord to avoid such default, in order to avoid any conflict with respect to whether or not self-help should have been availed of by Tenant, or with respect to the reasonableness of the expenses incurred by Tenant.

10.8 BROKERAGE.

Each party warrants and represents to the other party that it has had no dealings with any broker or agent in connection with this Lease other than Insignia/ESG, Inc. ("Broker") and covenants to defend with counsel reasonably approved by such other party, hold harmless and indemnify such other party from and against any and all cost, expense or liability arising from any breach of the foregoing warranty and representation.

10.9 APPLICABLE LAW AND CONSTRUCTION.

This Lease shall be governed by and construed in accordance with the laws of the state in which the Premises are located. If any term, covenant, condition or provision of this Lease or the application thereof to any person or circumstances shall be declared invalid, or unenforceable by the final ruling of a court of competent jurisdiction having final review, the remaining terms, covenants, conditions and provisions of this Lease and their application to persons or circumstances shall not be affected thereby and shall continue to be enforced and recognized as valid agreements of the parties, and in the place of such invalid or unenforceable provision, there shall be substituted a like, but valid and enforceable provision which comports to the findings of the aforesaid court and most nearly accomplishes the original intention of the parties.

There are no prior oral or written agreements between Landlord and Tenant affecting this Lease. The Letter of Intent dated September 13, 2000 from Broker to Tenant shall be of no further force or effect. This Lease may be amended, and the provisions hereof may be waived or modified, only by instruments in writing executed by Landlord and Tenant. The titles of the

several Articles and Sections contained herein are for convenience only and shall not be considered in construing this Lease. Unless repugnant to the context, the words "Landlord" and "Tenant" appearing in this Lease shall be construed to mean those named above and their respective heirs, executors, administrators, successors and assigns, and those claiming through or under them respectively. If

there be more than one tenant the obligations imposed by this Lease upon Tenant shall be joint and several.

10.10 SUBMISSION NOT AN OFFER.

The submission of a draft of this Lease or a summary of some or all of its provisions does not constitute an offer to lease or demise the Premises, it being understood and agreed that neither Landlord nor Tenant shall be legally bound with respect to the leasing of the Premises unless and until this Lease has been executed by both Landlord and Tenant and a fully executed copy delivered to each of them.

10.11 SECURITY DEPOSIT.

Tenant will provide within five (5) business days of the date of full execution hereof by Landlord and Tenant and as a condition of this Lease shall keep in effect throughout the Term, a standby letter of credit in the Security Deposit Amount (as hereinafter defined) as security for the performance of the obligations of Tenant hereunder in accordance with the following requirements. As used herein, the term "Security Deposit Amount" shall mean and refer to the sum of the Initial Estimated Annual Additional Rent for Premises, the Initial Estimated Annual Rent for Complex plus the Annual Fixed Rent, as the same may be adjusted in accordance with Section 2.3, Section 4.1(b) and Section 10.12 hereof. If Tenant elects to have Landlord advance the Tenant Allowance, the Security Deposit Amount shall thereupon be increased by
[*****Confidential*****]. On the effective date of any such adjustment of the Annual Fixed Rent Rate, Tenant shall provide a replacement letter of credit for the amount of the adjusted Security Deposit Amount. Any letter of credit provided by Tenant shall be in form and substance acceptable to Landlord and shall be drawn on Fleet National Bank (or another Boston clearinghouse bank reasonably satisfactory to Landlord) for the Security Deposit Amount in Landlord's favor. Tenant shall provide for replacements thereto to be issued and delivered to Landlord at least 30 days prior to the expiration of the then effective letter of credit, time being of the essence. The letter of credit shall be payable to Landlord upon presentation at the issuing bank's offices in Boston of a sight draft signed by Landlord stating that Landlord is entitled thereto, and a certification of Landlord that the person signing the certification is duly authorized to do so, that an uncured default exists under the Lease, that the default has continued after the expiration of any applicable cure period, and that the amount of the draft does not exceed the amount reasonably required to cure such default (the "Default Certification"). Landlord agrees that it shall present such sight draft and Default Certification only if Tenant defaults in performance of its obligations hereunder and such default shall have continued past any applicable notice and grace period. Any letter of credit in effect during the last year of the Term shall expire no earlier than 30 days after the expiration of the Term of the Lease. The letter of credit shall provide for partial draws and shall be assignable by Landlord. If Tenant shall fail to perform any of its obligations under this Lease including a failure timely to provide a replacement letter of credit, Landlord may, but shall not be obligated to, apply the letter of credit

to the extent necessary to cure the default, and Tenant shall be obligated to reinstate the letter of credit to the Security Deposit Amount then in effect. Tenant shall not have the right to call upon Landlord to draw upon all or any part of the letter of credit to cure any default or fulfill any obligation of Tenant, but such use shall be solely in the discretion of Landlord. Provided that Landlord gives Tenant notice of the name of such grantee or transferee, upon any conveyance by Landlord of its interest under this Lease, the letter of credit may be delivered by Landlord to Landlord's grantee or transferee. Upon any such delivery, Tenant hereby releases Landlord herein named of any and all liability with respect to the letter of credit, its application and return, and Tenant agrees to look solely to such grantee or transferee. It is further understood that this provision shall also apply to subsequent grantees and transferees. Notwithstanding the foregoing, in lieu of a letter of credit, Tenant may deliver cash in the Security Deposit Amount to Landlord, in which event applicable provisions of this Section 10.11 shall apply to Landlord's use and delivery thereof. If Tenant elects to deliver cash to Landlord in the Security Deposit Amount, Tenant, subject to Landlord's prior written approval, may designate the investment thereof, and interest earned thereon shall be disbursed to Tenant on a yearly basis so long as no default has occurred and is then continuing.

10.12 OPTIONS TO EXTEND.

(a) Tenant shall have two (2) options to extend the Term of this Lease (the "Options to Extend") for successive periods of ten (10) years each (the "Extension Periods"), subject to and on the terms set forth herein. Tenant may only exercise the Options to Extend with respect to the entire Premises. If Tenant shall desire to exercise any Option to Extend, it shall give Landlord a notice (the "Inquiry Notice") of such desire not later than eighteen (18) months prior to the expiration of the Initial Term of this Lease or the preceding Extension Period, as the case may be. Thereafter, the Fair Market Rent (as defined in Subsection (c) below) for the applicable 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 Option to Extend by giving Landlord notice (the "Exercise Notice") of its election to do so not later than fifteen (15) months prior to the expiration of the Initial Term of this Lease, or the preceding Extension Period, as the case may be. If Tenant fails to timely give either the Inquiry Notice or the Exercise Notice to Landlord with respect to any Option to

Extend, Tenant shall be conclusively deemed to have waived such Option to Extend hereunder.

(b) Notwithstanding any contrary provision of this Lease, each Option to Extend and any exercise by Tenant thereof shall be void and of no force or effect unless on the dates Tenant gives Landlord its Inquiry Notice and Exercise Notice for each Option to Extend and on the date of commencement of the each 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 of the Premises.

(c) All of the terms, provisions, covenants, and conditions of this Lease shall continue to apply during each Extension Period, except that the Annual Fixed Rent Rate during each Extension Period (the "Extension Rent") shall be equal to the 100% of the fair market rent for the Premises determined as of the date twelve (12) months prior to expiration of the Initial

Term or the preceding Extension Period, as the case may be, in accordance with the procedure set forth in Subsection (d) below (the "Fair Market Rent"), but in no event shall the Fair Market Rent for the first Extension Period be less than the Annual Fixed Rent for the fifteenth Lease Year and in no event shall the Fair Market Rent for the second Extension Period be less than the Annual Fixed Rent for the twenty-fifth Lease Year.

(d) The Fair Market Rent for each Extension Period shall be determined as follows: Within five (5) days after Tenant gives Landlord its Inquiry Notice with respect to any Option to Extend, Landlord shall give Tenant notice of Landlord's determination of the Fair Market Rent for the applicable 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 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 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 shall have ten (10) days thereafter to appoint a third Arbitrator (the "Third Arbitrator"), who shall be instructed to determine the Fair Market Rent for the applicable Extension Period within ten (10) days after its 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.

(f) Regardless of the manner in which the Extension Rent is determined, the Annual Fixed Rent for each Extension Period shall be subject to adjustment as set forth in Section 4.1(b) hereof.

10.13 INTENTIONALLY OMITTED.

10.14 PARKING.

Commencing as of the Commencement Date, Tenant shall pay monthly, in advance, as Additional Rent the then fair market value (the "Parking Fee") as determined by Landlord (adjusted no more frequently than annually) for each of Tenant's Parking Spaces to be leased to Tenant. All of Tenant's Parking Spaces leased hereby may only be utilized by Tenant's employees, visitors, sublessees of the Premises or assignees of the Lease, visiting or working at the Premises. All of Tenant's Parking Spaces shall be located in the underground parking structure to be constructed and/or owned by Landlord or an Affiliate of Landlord (as hereinafter defined) south of Kendall Street, as shown on Exhibit A hereto (the "Garage"). The owner of the Garage from time to time is herein referred to as the "Garage Owner", and the Tenant's Parking Spaces are sometimes herein referred to as the "Garage Parking Spaces." Landlord covenants and agrees that if the Garage is conveyed by Landlord to any other person or entity, including an Affiliate of Landlord, such conveyance shall be subject to a lease, permanent easement or similar instrument by and between Landlord and the Garage Owner so that the Tenant shall have, throughout the Term, the right to use the Garage Parking Spaces, subject to the terms of this Lease.

The Garage Owner shall have the right, from time to time but not more often than every six (6) months, to relocate, on a temporary basis as may be necessary to effect repairs and improvements to the Garage or for other business reasons, parking spaces located in the Garage to another location within 1,000 feet of the Lot, provided that in each instance such other location may be lawfully used for accessory parking, and provided further that the monthly rent to be paid by Tenant for each temporarily relocated parking space shall be an amount equal to the fair market value thereof but in no event more than the rent then being paid by Tenant for a parking space in the Garage. Anything herein to the contrary notwithstanding, Landlord shall have the right to relocate all or any number of the Garage Parking Spaces to a garage which may be constructed by Landlord or an Affiliate of Landlord in the northerly portion of the Complex provided that access from the Building to such other garage is substantially as convenient as access between the Building and the Garage, whereupon provisions of this Lease applicable to the Garage, the Garage Owner and the Garage Parking Spaces shall apply, mutatis mutandis, to such garage, garage owner and the Garage Parking Spaces located therein. Upon request of either Landlord or Tenant, the parties hereto shall execute and deliver an amendment of this Lease to reflect the relocation of Tenant's Parking Spaces.

Neither Landlord nor the Garage Owner shall be responsible for money, jewelry, automobiles or other personal property lost in or stolen from the Garage, regardless of whether such loss or theft occurs when the Garage or other areas therein are locked or otherwise secured against entry, or liable for any loss, injury or damage to persons using the Garage or automobiles or other property therein, it being agreed that the use of the Garage and the Garage Parking Spaces shall be at the sole risk of Tenant and its employees, visitors and guests. Landlord and the Garage Owner shall have the right from time to time to promulgate reasonable rules and regulations regarding the Garage, the Garage Parking Spaces and the use thereof, including, but not limited to, rules and regulations controlling the flow of traffic to and from various parking areas, the angle and direction of parking and the like, which rules and regulations and any additions and amendments thereto Garage Owner shall use reasonable efforts to consistently apply to all users of the Garage. Tenant shall comply with and cause its employees, visitors and

guests to comply with all such rules and regulations as well as all reasonable additions and amendments thereto.

Except for emergency repairs using authorized repair services, no person using the Garage Parking Spaces shall perform any work on any automobiles while located in the Garage. An approved assignment of this Lease by Tenant or an assignment of this Lease by Tenant not requiring Landlord's consent shall include an assignment of Tenant's right to use all of Tenant's Parking Spaces in accordance with this Lease. An approved sublease by Tenant or a sublease by Tenant not requiring Landlord's consent shall include the right to use a substantially proportionate number of Tenant's Parking Spaces in light of the r.s.f. subleased by Tenant. Except in connection with an approved assignment of the Lease or an approved subletting of all or a portion of the Premises in accordance with the terms hereof, Tenant shall not assign or sublease any of the Garage Parking Spaces. Landlord shall have the right to terminate this Lease with respect to any Garage Parking Spaces that Tenant sublets or assigns in violation of the foregoing sentence. Landlord or the Garage Owner may elect to provide parking cards or keys to control access to the Garage. In such event, Landlord or the Garage Owner shall provide Tenant with one card or key for each Garage Parking Space that Tenant is leasing hereunder, provided that Landlord or the Garage Owner shall have the right to require Tenant or its employees to place a reasonable deposit on such access cards or keys and to pay a reasonable fee for any lost or damaged cards or keys. If the Garage Owner does not provide 24-hour per day, seven day per week manned security and/or controlled access for the Garage (collectively, "Garage Security Services"), Landlord shall arrange for such Garage Security Services and the costs of such Garage Security Services (prorated, if appropriate, among all users of the Garage requesting Garage Security Services) shall be included in the Nonstandard Charge payable by Tenant pursuant to Section 4.2.4 hereof. Tenant, at its sole cost and expense, may obtain extra cards and keys from Landlord or the Garage Owner if any cards are lost, stolen or destroyed.

10.15 CONFIDENTIAL INFORMATION.

Landlord hereby agrees that any and all knowledge, information, data, materials, trade secrets, and other work product of a confidential nature gained, obtained, derived, produced, generated or otherwise acquired by Landlord with respect to Tenant's business (collectively "Confidential Information") shall be kept confidential. Landlord shall use diligent efforts to ensure that no Confidential Information is revealed, divulged, communicated, related, or described to any person or entity without the written consent of Landlord, except as may be required by applicable law.

10.16 SIGNAGE.

Tenant shall be permitted, at its sole cost and expense, to install and maintain signs on the exterior of the Building bearing Tenant's name (or something similar reasonably approved by Landlord), provided that: (i) the size, location, quality, color and style of such signs shall be subject to Landlord's approval, such approval not to be unreasonably withheld or delayed, and (ii) such signs shall be subject to the Development Approvals, the Subsequent Approvals and limitations of applicable law, including, without limitation, the Cambridge Zoning Ordinance, as amended from time to time. Tenant shall secure all permits and approvals necessary for the

installation of such signs at its sole cost and expense. Upon the expiration or sooner termination of the Term of this Lease, Tenant shall remove such signs and repair any damage resulting therefrom at Tenant's sole cost and expense.

10.17 TELECOMMUNICATIONS EQUIPMENT.

Landlord shall provide Tenant with reasonable and adequate space on the roof of the Building for Tenant's telecommunications equipment, which Tenant may install at Tenant's sole cost and expense, provided however, that (i) the size, location and plans and equipment shall be subject to Landlord's approval, such approval not to be unreasonably withheld or delayed, (ii) the installation and maintenance thereof shall be subject to the Development Approvals, the Subsequent Approvals and limitations of applicable law, including without limitation, the Cambridge Zoning Ordinance, as amended from time to time and (iii) the use of such telecommunications equipment shall be limited to Tenant in the conduct of the Permitted Uses and not as a principal or accessory use of the Premises. Tenant shall secure all permits and approvals necessary for the installation of such equipment at its sole cost and expense. Upon the expiration or sooner termination of the Term of this Lease, Tenant shall remove such equipment and repair any damage resulting from such removal at Tenant's sole cost and expense, provided however, that Tenant shall leave all cabling and wiring for its telecommunications equipment, but such cabling and wiring shall be appropriately and safely capped by Tenant. The installation of such equipment shall be deemed to be part of Tenant's Work and all provisions of this Lease, including insurance provisions, shall be applicable thereto.

WITNESS the execution hereof under seal as of the 18th day of January, 2001.

LANDLORD: KENDALL SQUARE, LLC

By: Lyme Properties LLC, a New Hampshire limited liability company, its Manager

/s/ David E. Clem

David E. Clem,
Member

TENANT: VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Joshua S. Boger

Its: Chief Executive Officer
hereunto duly authorized

EXHIBIT A

Plan Showing Complex

[Plan]

EXHIBIT A-1

Legal Description

(to be provided by Landlord)
EXHIBIT A-2

Plan Showing Lot
(to be provided by Landlord)
EXHIBIT A-3

Confirmation of Commencement Date
And Rentable Square Footage

Reference is made to that certain Lease dated December ____, 2000 (the "Lease") by and between KENDALL SQUARE, LLC ("Landlord"), a Delaware limited liability company, and VERTEX PHARMACEUTICALS INCORPORATED ("Tenant"), a Massachusetts corporation, for certain space in Building A located at Cambridge Research Park, Cambridge, Massachusetts (the "Premises").

In accordance with the terms and provisions of the above-referenced Lease, Landlord and Tenant hereby confirm the following as of the date hereof:

The Commencement Date of the Lease is _____ ____, 2002.

A. The rentable square footage of the Premises is _____ square feet.

B. The rentable square footage of the Building is _____ square feet.

C. Tenant's Proportionate Fraction for Building is ___%.

D. Tenant's Proportionate Fraction for Complex is ___%.

Agreed and Accepted as of the Commencement Date:

VERTEX PHARMACEUTICALS INCORPORATED

By:_____

Title:_____

Date of Execution:_____, 2002

KENDALL SQUARE, LLC

By:_____

Title:_____

Date of Execution _____, 2002

EXHIBIT B

Base Building Description

Part I hereof sets forth the elements of the fire protection, plumbing, HVAC, electrical and subslab venting systems for the Building.

Part II hereof sets forth guidelines which are to serve as a source of information for the Landlord's design team as more fully set forth in Part II hereof. Anything in Part II to the contrary notwithstanding, Landlord and Tenant acknowledge and agree that, as currently contemplated, the Building will not include a basement, but that a basement may be included in the Building if Landlord and Tenant hereafter agree to include a basement in the Building, which agreement with respect thereto shall require an amendment to this Lease.

PART I

FIRE PROTECTION

o New water service with double check valve assembly and alarms.

o Distribution risers and mains.

o Common areas shall be finished with recessed heads.

o Tenant area shall have upright heads.

PLUMBING

o New water service with meter.

o Cold water distribution to toilet cores.

o Local electric domestic hot water heaters for toilet cores.

o Common area toilet cores.

o Roof drainage and storm system.

o New waste system.

o Ph adjustment and acid waste system to be provided by Tenant.

HVAC

o 2 CFM per square foot, 100% outside air delivered from custom air handling units. o Water cooled chillers with 15% additional capacity for supplemental cooling.

o Hot water boilers for ventilation and heating.

o Chilled water risers with valve and capped stub outs per floor for supplemental cooling.

o Hot water risers with valve and cap stubs outs per floor for reheats and heating.

o Cooling towers.

o Chilled water pumps and distribution piping to equipment and risers.

o Condenser water pump and distribution piping to equipment and risers.

o Hot water pump and distribution piping to equipment and risers.

o Automatic Temperature Control utilizing direct digital control for Base Building Equipment.

o Common area distribution ductwork with fan powered terminal unit (hot water).

o Heat at entrance ways.

o Toilet exhausts systems.

o Mechanical Room and Electrical Room heat and ventilation systems.

o Medium pressure distribution ductwork risers with stub outs on each floor.

o Allocation for exhaust air shafts.

o Allocation for return air shafts.

ELECTRICAL

o Building primary service shall be sized for a capacity of 20 VA/SF from the Utility Company.

o Exterior pad-mounted transformer or interior vault transformer will be 13.8 kV-480/277 V, 3-phase, 60 Hertz. Location of transformer to be determined by utility company.

o Interior switchgear will be 480/277V, 3-phase, 60 Hertz for secondary service.

o Feeders to water cooled chillers.

o Feeders to passenger elevators and service elevator.

o Feeders to busduct risers.

o Busduct risers for 'future' tenant use.

o House distribution equipment to serve 'Common' Areas.

o House motor control center to serve air handling units, hot water boilers, cooling towers, chilled water / condenser water / hot water pumps and exhaust fans.

o Expandable addressable fire alarm system including devices in 'Common' Areas, and future tenant areas.

o Exterior site lighting.

o Exterior ductbank and interior conduit provisions for telephone and cable TV service.

o Lighting Protection system.

o Lighting in 'Common Areas', exit lighting and emergency lighting (battery packs).

o Lighting in Mechanical Areas.

SUBSLAB VENTING

o Plastic geomembrane vapor barrier installed directly beneath the floor slab, which is to be sealed to foundation elements such as grade beams, pile caps, elevator sumps and utility penetrations so that vapors cannot enter the Building.

o Perforated piping to be installed directly beneath the vapor barrier throughout the Building footprint within a one-foot layer of gravel placed after piles, pile caps, grade beams and other foundation elements are constructed.

o One or more riser pipes will be installed from the venting piping through the floor slabs of the Building to the Building roof by way of the utility cores of the Building.

o A wind driven turbine may be installed on riser pipe(s) at the terminus thereof on the roof of the Building to provide negative pressure for the system.

o Blowers are to be installed on the riser pipe(s) and a vapor treatment system is to be installed.

PART II

1. GOAL OF DESIGN GUIDELINES

The purpose behind these Guidelines is to identify the typical Tenant fit-up requirements in order to ensure that these standards are acknowledged in the Base Building

Improvements. They are to serve as a source of information to the Landlord's architectural team regarding Tenant's current approach toward the fit-up of Tenant's facilities. These Guidelines are intended to be specific enough that they satisfy the needs of the Tenant, and yet generic to the point that they do not limit or inhibit the design intent for the shell & core of the Building. Most of the issues identified in these Guidelines will require review and coordination between the Landlord's and Tenant's architecture teams in order that exterior architecture and interior architecture and engineering support one another, and maintain the aesthetic expression established in conceptual design.

2. BUILDING SHELL & CORE

Exterior Entrance

The exterior entry of the typical facility of Tenant is generally a prominent gesture on the exterior of the building, one that clearly defines the "front door" of the facility to the incoming public and staff. The significance of this public threshold should be expressed on the Building's exterior.

With security being a major issue, a single public entry is preferred over multiple entrances. Although multiple entries can be accommodated successfully if a defined Tenant control point is established within the lobby, a clear zoning of the circulation is established, and unobstructed sightlines are maintained. This entry point will provide for public pedestrian access from the street, as well as the foot traffic approaching the Building from the adjacent, exterior courtyard, and the vehicular drop-off and parking areas. The provision for short-term parking spaces that have proximity to the main entrance is desirable. The main entry door will also most likely be the access point for certain incoming packages and deliveries (i.e. Fed-Ex, couriers, taxis, limousines, etc.), making short term parking for these types of vehicles desirable as well.

Lobby/Reception/Atrium

Tenant has consistently dedicated the most architecturally significant or prominent areas in its buildings as public or common spaces for its staff, as opposed to dedicating these areas to individual users. This includes multi-story spaces, those areas within the highest floor level of the building that offer significant views of the surrounding city, or those zones within the floor plate that occur along or at the intersections of highly public circulation paths. The programs that generally occupy these significant areas are typically common staff or building areas, such as the main building lobby/atrium, reception, food service/cafeteria, fitness center, library space, and conference/assembly areas (see description of tenant fit-up/common areas below).

The main lobby and/or atrium will house the public reception area for the complex. It is generally the single, controlled access point to the facility for incoming public traffic, including that associated with staff, general visitors, and vendors. This main lobby creates one's first impression of Tenant, and therefore it should characterize the culture and vitality of the company. It is anticipated that this atrium space will be a fairly grand, multi-story volume, with an abundance of natural light; this central space should also serve to enhance the level of interaction among the staff of Tenant.

The acoustic and environmental issues related to the lobby, atrium and reception areas have been a concern on past projects. The owner has generally been in support of materials that have acoustically absorptive properties in order to maintain comfortable sound levels within these spaces. In addition, appropriate architectural and mechanical zoning that serves to reduce the potential for drafts or thermal gains in these highly active areas is also desirable. Materials considered should be in keeping with the overall aesthetic of the Building, and yet are durable, easily maintained, and slip resistant.

The reception station/area will need to accommodate two individuals, each having a concealed computer monitor, file space, and security / tele-data connections. The reception area should have direct access to restrooms for visitors, display space for Tenant's products, coat closet / storage, and the potential of a concealed mail and operator rooms. The desk design and materials should be in keeping with the aesthetic expression of the Building, while also incorporating durable materials in order to withstand the high volume of traffic it will experience. Even though it is not necessary that the security office be located adjacent to the reception/lobby areas, it will need a reasonable proximity to this area.

Retail Space

The Retail Space outside of Tenant's Premises will need to have direct public access from the exterior of the Building. Tenant may permit limited secondary access from the interior atrium space, though this access will need to be coordinated with Tenant's security program. All loading and service facilities related to the Retail Space will need to be coordinated with Tenant's loading and service facilities and subject to Building Rules and Regulations.

Restrooms

The restrooms are generally positioned in a conspicuous and consistent location on the floor plate, having proximity to the highly public areas of the Building. Having multiple restroom cores on each floor is desirable, and will need to be verified with the occupant loads anticipated on each level. The materials and detailing of these areas should be in keeping with the aesthetic expression of the Building, and should incorporate durable materials, details, and fixtures that are easily maintained, such as ceiling hung, brushed stainless steel toilet partitions, and wall hung toilets. All toilet accessories are typically brushed stainless steel, recessed elements.

Elevators

The elevator core of the Building needs to be centrally located, adjacent to the main Building lobby, and within proximity of the atrium space. The elevator works are generally an electric, traction type assembly, with an average speed of 150 fpm - 175 fpm, although hydraulic elevators are often preferred by the Tenant in some circumstances; the elevator type, size and speed will need to be reviewed and coordinated with Tenant's intended programs. The hoistway doors and frames are typically constructed of a brushed stainless steel; all elevator accessories are also brushed stainless steel. The cab finishes should include a brushed stainless steel control panel on each side of the elevator door, with durable wall and ceiling panels that are consistent

with the aesthetic expression of the Building. Like the wall surfaces, the flooring should be highly durable and easily maintained. The lighting levels within the cabs should approximate those design levels within the adjacent elevator lobbies.

Service/Freight Elevators

Typically, a minimum of one service elevator is provided to each level of the proposed building, and extends to the mechanical penthouse level. The speed of the service elevator will need to be comparable to that of the public elevators. The service elevator cab is typically oversized in terms of its width, length and height, being large enough to accommodate a standard fumehood (approximately 8' x 10.5'). The hoistway doors are typically oversized as well, with a preferred opening of approximately 9'-0" clear. The cab finishes are generally brushed stainless steel panels, with brushed stainless steel hoistway doors, frames, and control panels. The flooring within this cab is generally sheet vinyl or vct.

Loading Docks/Service Entrance

The typical program related to the loading and service dock area includes two active loading berths for full size trucks, and one additional berth for a trash compactor. If the dock itself is ramped to allow the trailer floor surface to be co-planar with the dock elevation within the Building, a hydraulic lift will need to be provided adjacent to the sloped dock; this device will allow smaller trucks and vans that unload on grade to lift their palettes and materials to the dock level. Provisions for coiling overhead doors and industrial grade, moveable lighting is also recommended. A main door that provides access to the service area will also be necessary for short term deliveries, with a security control point to prevent unauthorized access into the Building. The loading dock is generally located out of the public view, with convenient service access to the adjacent streets.

Mechanical Penthouse

The typical penthouse standards are as defined by the MEP/FP engineers' criteria (see below). The penthouse floor area generally occupies up to 70% of the typical building footprint, and requires an average, vertical clearance of approximately 20'-0" for MEP/FP equipment and its distribution. Service aisles will need to be provided for the maintenance and/or replacement of penthouse equipment. Access from the penthouse level to the roof level will be necessary in order to allow for the routine service and maintenance of all roof-mounted equipment and of the Base Building Improvements at this level. All rooftop mechanical equipment included in the Base Building Improvements will need to be located on steel donnage with grating platforms for ease of servicing. The structural and acoustical issues related to the proposed penthouse equipment will need to be analyzed and coordinated with the base building scope. As previously mentioned, service elevator access to the penthouse level is also necessary.

Basement Level (Optional)

Basement levels are generally preferred within the scope of a project in order to provide housing for various support areas, such as waste treatment pH neutralization, pump rooms, electric rooms, dedicated phone and tele-data rooms, the potential of tank storage for the emergency generator fuel source, and other Tenant and shell & core elements of the program.

The basement floor area that is typically required for these program elements is approximately 15,000 sf, and requires stair and freight

elevator access. If a basement is not provided, space will need to be dedicated to these functions on the first level of the building, adjacent to the loading /service dock area.

Exterior Envelope

The exterior envelope for the Building will need to be coordinated with the Tenant's interior fit-up in order to assure the appropriate accommodation of the current program, and also to allow for future flexibility related to unforeseen demands. The average floor to floor height is recommended to be approximately 14'-6" -15'-0" between each floor level, which will allow adequate space for MEP/FP distribution while maintaining a minimum 9"-0" ceiling height above the finished floor within the tenant spaces. As a result, the frame of exterior window heads are typically set at 9'-0" above the finished floor, with the windowsill at 3'-8" minimum above the finished floors of the lab and office areas. The MEP/FP distribution of services at the perimeter wall of the Lab Zones will need to be coordinated in order to maintain the original design intent.

Floor to ceiling glass within the working areas of a building has generally proven to be problematic, resulting in unanticipated spandrel conditions at the exterior wall. Sills below this datum within the office zones can also limit the future flexibility of converting office areas into lab or support zones. All exterior glass is to be insulating, and fixed in its frame. The exterior curtainwall systems will also need to accommodate the thermal criteria of the mechanical specifications, providing for an average of 30% RH throughout the Building, with an occasional support area requiring higher humidity levels. The interior and exterior finish selections for the base building scope will also need to be coordinated with the Tenant design during the early phases of the Building's development.

Structural System

The Building's structural system will most likely be a braced steel frame with composite floor slabs. This approach offers the most flexibility in future alterations to the Building, and is also an economical approach to a building structure in the New England construction market. The typical floor loading criteria that should be expected is the following:

Uniformly Distributed Design Loads

- Offices allowance	80 lbs. psf + 20 lbs. psf partition
- Corridors	80 lbs. psf (above Level One)
- Stairs	100 lbs. psf
- Mechanical Areas	150 lbs. psf (or actual equip. weights if greater)
- Elevator Machine Room	150 lbs. psf

All anticipated floor loading for the Building, including the uniformly distributed loads, roof live loads, concentrated live loads, live load reductions, wind and seismic loads, etc., should be reviewed with the structural engineer of record.

The structural system and its grid spacing should conform to the standard lab module identified below, with a 22'-0" wide column spacing along the length of the building, as shown on Drawings A1.01 - A1.08 dated December 20, 2000. As previously mentioned, the optimum, average floor to floor height for the Building is approximately 14'-6" to 15'-0" from finished floor to the adjacent finished floors. The average penthouse volume requires approximately 20'-0" clear for MEP distribution, with an additional 2'-6" of structure at the penthouse roof.

Electrical Rooms/Plumbing Closets/Shaft Areas

The typical shell & core areas required for the mechanical, normal electrical, emergency electrical, plumbing, and fire protection equipment will need to be sized and located in accordance with the MEP/FP Guidelines, and coordinated with the schematic layout of the Tenant areas of the Building. All additional shaft areas that are necessary as a result of the development of the interior fit-up will be coordinated with the Shell & Core scope during the subsequent phases.

EXHIBIT B-1

Progress Schedule

	ITEM	COMPLETION DATE
1.	Selection of Landlord's Architect and agreement upon Preliminary Design Concept	Completed prior to Lease execution
2.	Plans	
	Preliminary Schematic Design Documents delivered to Tenant and Landlord	February 1, 2001
	Tenant's Response to Preliminary Schematic Design Documents	February 8, 2001
	Final Schematic Design Documents delivered to Tenant and Landlord	February 15, 2001
	Tenant's Response to Final Schematic Design Documents	February 22, 2001
	Planning Board Design Review Hearing	February 6, 2001
	Planning Board Design Review Approval	March 6, 2001
	Preliminary Design Development Documents delivered to Tenant and Landlord	April 16, 2001
	Tenant's Response to Preliminary Design Development Documents	April 23, 2001
	Final Design Development Documents including partial building permit set delivered to Tenant and Landlord	April 30, 2001
	Tenant's Response to Final Design Development Documents	May 7, 2001
	Final Design Documents delivered to Tenant and Landlord	September 12, 2001
	Tenant's Response to Final Design Documents	September 19, 2001
	Partial Building Permit Issued	June 6, 2001
	Full Building Permit Issued	October 3, 2001
	Tenant's Construction Drawings Complete	January 15, 2002
	Commencement of Construction of Tenant's Work	April 16, 2002
	Substantial Completion of Base Building Improvements	September 15, 2002

EXHIBIT B-2

Items/Categories of Annual Maintenance Charge, Insurance, Mitigation Expenses and Taxes and Assessments

Cleaning:
Daily Cleaning Service
Window Cleaning
Trash Removal - Routine
Trash Removal - Other
Exterminating
Other Cleaning
Total Cleaning

Repairs & Maintenance:
Maintenance Salaries
Elevator Service Contracts
Elevator Repairs
HVAC - System Contracts
HVAC - Extra Repairs
Electrical Repairs
Plumbing Repairs
Roofing Repairs
Alarm Systems Maintenance
Alarm Systems Inspections
Other Maintenance &
Supplies (including architectural
repairs, finishes, hardware, etc.)
Total Mechanical Systems

Utilities:
Electricity
Gas
Water & Sewer
Steam
Telephone
Data
Other
Total Utilities net of Tenant Electricity

Roads/Grounds/Security
Landscaping Contracts
Snowplowing Contracts
Other Roads/Grounds Expenses
Skating Rink Expenses
Small Boat Ramp Expenses
Security Payroll
Security Contracts
Total Roads/Grounds/Security Administrative:
Admin Salaries
Management Fee
Monitoring Fee
Legal Expense
Office Supplies
Postage & Delivery
Telephone Expense
Office Rent
Other Admin Expenses
Total Admin Expenses

Mitigation Expenses:
PTDM Fees

Other Mitigation Expenses
Total Mitigation Expenses

Insurance:
General Liability
Property Insurance
Rental Interruption
Other Insurance
Total Insurance

Total Expenses Before Taxes

Taxes and Assessments:
Real Estate Taxes
Other Taxes
TOTAL EXPENSES

EXHIBIT C

Rules and Regulations

1. The common entrances, lobbies, elevators, sidewalks, and stairways of the Building, the Lot and the Complex shall not be encumbered or obstructed by Tenant, Tenant's agents, servants, employees, licensees or visitors or used by them for any purposes other than ingress or egress to and from the Building.

2. Landlord reserves the right to have Landlord's structural engineer review Tenant's floor loads on the Building at Tenant's expense.

3. Tenant, or the employees, agents, servants, visitors or licensees of Tenant shall not at any time place, leave or discard any rubbish, paper, articles, or objects of any kind whatsoever outside of the Building. Bicycles shall not be permitted in the Building unless Landlord provides for the parking thereof in the Building.

4. Tenant shall not place objects against glass partitions or doors or windows or adjacent to any common space which would be unsightly from the exterior of the Building and will promptly remove the same upon notice from Landlord.

5. Tenant shall not make noises, cause disturbances, create vibrations, odors or noxious fumes or use or operate any electric or electrical devices or other devices that emit sound waves or that would interfere with the operation of any device or equipment or radio or television broadcasting or reception from or within the Building or elsewhere, or with the operation of roads or highways in the vicinity of the Building and shall not place or install any projections, antennae, aerials, or similar devices inside or outside of the Building, without the prior written approval of Landlord.

6. Tenant shall not: (a) use the Building for lodging, or for any immoral or illegal purposes; (b) use the Building to engage in the manufacture or sale of spirituous, fermented, intoxicating or alcoholic beverages in the Building; (c) use the Building to engage in the manufacture or sale of, or permit the use of, any illegal drugs on the Building.

7. No awning or other projections shall be attached to the outside walls or windows. No curtains, blinds, shades, screens or signs, other than those, if any, furnished by Landlord, shall be attached to, hung in, or used in connection with any exterior window or door of the Building without the prior written consent of Landlord. No sign, advertisement, object, notice or other lettering shall be exhibited, inscribed, painted or affixed on any part of the outside or inside of the Building if visible from outside of the Building without the prior written consent of Landlord.

8. Door keys, pass cards or similar devices for doors in the Building will be furnished on the Commencement Date by Landlord. If Tenant shall affix additional locks on doors then Tenant shall furnish Landlord with copies of keys or pass cards or similar devices for said locks. 10. Tenant shall cooperate and participate in all reasonable security programs affecting the Building and Complex.

11. Tenant assumes full responsibility for protecting its space from theft, robbery and pilferage, which includes keeping doors locked and other means of entry to its space in the Building closed and secured.

12. The water and wash closets and other plumbing fixtures shall not be used for any purposes other than those for which they were

constructed, and no sweepings, rubbish, rags, or other substances shall be thrown therein.

13. Discharge of industrial sewage shall only be permitted if Tenant, at its sole expense, shall have obtained all necessary permits and licenses therefor, including without limitation permits from state and local authorities having jurisdiction thereof.

14. Tenant shall not mark, paint, drill into, or in any way deface any part of the Building or Premises. No boring, driving of nails or screws, cutting or stringing of wires shall be permitted except with the prior written consent of Landlord not to be unreasonably withheld, and as Landlord may direct. Tenant shall not install any resilient tile or similar floor covering in the Premises except with the prior written approval of Landlord not to be unreasonably withheld. The use of asbestos containing cement or other similar asbestos containing adhesive material is expressly prohibited.

15. In the event of any conflict between the provisions of this Exhibit C and the provisions of the Lease, the provisions of the Lease shall govern.

EXHIBIT D

Form of SNDA
(attached)
SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT

THIS SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT ("Agreement") is entered into this ____ day of _____, 200__, between _____ ("Lender"), and Vertex Pharmaceuticals Incorporated, a Massachusetts corporation ("Tenant").

R E C I T A L S:

A. Lender is the owner and the holder of a Promissory Note (the "Note") dated _____, 200__, in the face amount of $_____ payable to the order of Lender. The Note is secured by a Mortgage, Security Agreement and Fixture Filing with Assignment of Leases and Rents (hereinafter called the "Mortgage") dated of even date with said Note, secured by the real property described in Exhibit "A" attached hereto and by reference made part hereof (the "Property").

B. Tenant is the tenant under that certain Lease dated _____, 2000 (the "Lease"), between Tenant, as tenant, and Kendall Square, LLC, a Delaware limited liability company, as landlord (said landlord and its successors and assigns under the Lease hereinafter called "Landlord"), covering all or part of the Property as set forth in the Lease (the "Demised Premises").

C. Tenant and Lender desire to confirm their understanding with respect to the Lease and the Mortgage.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by all parties, Lender and Tenant hereby agree and covenant as follows:

1. Subordination. The Lease now is, and shall at all times and for all purposes continue to be, subject and subordinate, in each and every respect, to the Mortgage, with the provisions of the Mortgage (including but not limited to the provisions of the Mortgage pertaining to the application of insurance proceeds and condemnation awards) controlling in all respects over the provisions of the Lease; moreover the Lease is subordinate and subject, in each and every respect, to any and all increases, renewals, modifications, extensions, and/or consolidations of the Mortgage, and all other loan documents securing the Note, provided that any and all such increases, renewals, modifications, extensions and/or consolidations shall nevertheless be subject to the terms of this Agreement.

2. Non-Disturbance. So long as Tenant is not in any then current, uncured default as of the time of Lender's exercise of its rights under the Mortgage (beyond any period given Tenant to cure such default in the Lease) in the payment of rent or additional rent or in the performance of any of the terms, covenants or conditions of the Lease on Tenant' s part to be performed,
(i) Tenant' s possession, occupancy, use and quiet enjoyment of the Demised Premises and Tenant's other rights under the Lease, or any extensions or renewals thereof, which may be effected in accordance with any option therefor in the Lease, shall not be terminated or interfered with by Lender in the exercise of any of its rights under the Mortgage, or as may otherwise be provided for at law or in equity and (ii) Lender will not join Tenant as a party defendant in any action or proceeding for the purpose of terminating Tenant' s interest and estate under the Lease because of any default under the Mortgage.

3. Attornment. If any proceedings are brought for the foreclosure of the Mortgage or if the Property is sold pursuant to a power of sale under the Mortgage, or Lender shall succeed to the interest of Landlord under the Lease in any manner, Tenant shall attorn and be bound to such party (whether Lender or another party) upon any such succession in interest or foreclosure sale and shall recognize such party as the Landlord under the Lease. Such attornment shall be effective and self-operative without the execution of any further instrument on the part of any of the parties hereto. Tenant agrees, however, to execute and deliver at any time and from time to time, upon the request of Lender or of any holder(s) of any of the indebtedness or other obligations secured by the Mortgage or any purchaser of the Property at a foreclosure sale, any instrument or certificate which may be necessary or appropriate (in any such foreclosure proceeding or otherwise) to evidence such attornment. In the event of any such attornment, Tenant further waives the provisions of any statute or rule of law, now or hereafter in effect, which may give or purport to give Tenant any right or election to terminate or otherwise adversely affect the Lease and the obligations of Tenant thereunder as a result of any such foreclosure proceeding.

4. Obligations of Lender. If Lender shall succeed to the interest of the Landlord under the Lease, or if any purchaser acquires the Property, upon any foreclosure of the Mortgage, Lender or such purchaser, as the case may be, shall have the same remedies by entry, action or otherwise in the event of any default by Tenant (beyond any period given Tenant to cure such default) in the payment of rent or additional rent by Tenant or in the performance of any of the terms, covenants and conditions of the Lease on Tenant's part to be performed that the Landlord under the Lease had or would have had if Lender or such purchaser had not succeeded to the interest of Landlord. From and after any such attornment, Lender or such purchaser shall be bound to Tenant under all of the terms, covenants, and conditions of the Lease, and Tenant shall, from and after the succession to the interest of Landlord under the Lease by Lender or such purchaser, have the same remedies against Lender or such purchaser for the breach of any agreement contained in the Lease that Tenant might have had under the Lease against the Landlord if Lender or such purchaser had not succeeded to the interest of Landlord; provided further, however, that Lender or such purchaser shall not be liable or bound to Tenant as follows:

(a) for any act or omission of any prior landlord (including Landlord) provided, however, that nothing in this clause (a) shall release Lender or any such purchaser, after such attornment, from any obligation of a prior landlord to: (i) reconstruct or repair the Property following any fire, casualty or condemnation which may have occurred prior to such attornment, to the extent that insurance proceeds or condemnation awards are available and otherwise as required under Article VI of the Lease; or (ii) perform any on-going maintenance, repair and/or Building operation obligations of the prior landlord under the Lease even if the need for such item of repair, maintenance or Building operation arose prior to such attornment;

and provided further, nothing in this clause (a) shall affect or limit Tenant's express rights to terminate the Lease under Sections 3.2 and 6.1 of the Lease under the applicable circumstances set forth in each such section; or

(b) for any offsets or defenses which Tenant might have against any landlord prior to Lender (including Landlord); or

(c) for or by any rent or additional rent which Tenant has paid for more than the current month or the next succeeding month to any prior landlord (including Landlord) unless such rent payment is actually paid or credited to Lender or such purchaser by the prior landlord; or

(d) by any amendment or modification of the Lease made without Lender's written consent, which consent shall not be unreasonably withheld, conditioned or delayed if Lender determines that such amendment or modification will not materially and adversely affect the value of the Lease as collateral security for the Note; or

(e) for any security deposit, rental deposit or other deposit paid by Tenant to a prior landlord (including Landlord) unless such deposit is actually paid over or credited to Lender or such purchaser by the prior landlord;

(f) by any notice of a landlord default given by Tenant to a prior landlord (including Landlord) unless a copy thereof was also then given to Lender in accordance with this Agreement; or

(g) under any indemnification provisions set forth in the lease or for any damages Tenant may suffer as a result of any false representation set forth in the Lease, the breach of any warranty set forth in the Lease, or any act of, or failure to act by any party other than Lender or such purchaser, as applicable.

The person or entity to whom Tenant attorns shall be liable to Tenant under the Lease only to the extent of the interest of such person or entity in the Premises, the Building and the Lot (as such terms are defined in the Lease) and only for matters arising during such person's or entity's period of ownership, and, except for any liability arising during the period of ownership of such person or entity, such liability shall terminate upon the transfer by such person or entity of its interest in the Lease and the Property and the assumption of the Lease by the transferee.

Lender hereby agrees that if at the time of such attornment (x) Landlord has commenced but not substantially completed Landlord's Work and (y) Tenant has commenced Tenant's Work, then in order to complete Landlord's Work,
(i) Lender may elect to complete Landlord's Work, or (ii) if Lender does not elect to complete Landlord's Work, Tenant may advance funds to complete Landlord's Work, in which event Tenant shall receive an abatement of Annual Fixed Rent, commencing on the Rent Commencement Date, in an amount equal to the funds so advanced from time to time by Tenant with interest thereon at the non-default rate of interest set forth in the Note on the outstanding amount of such advances and continuing until

such abatement is exhausted. If Lender does not elect to complete Landlord's Work or if Lender elects to complete Landlord's Work but fails to substantially complete Landlord's Work by the Outside Completion Date, Tenant, shall have the right to terminate the Lease in accordance with the last paragraph of Section
3.2 of the Lease. If, however, Tenant advances funds to complete Landlord's Work in accordance with clause (iii) hereof, Tenant shall have no right to terminate this Lease pursuant to the last paragraph of Section 3.2 of the Lease if Landlord's Work is not substantially complete by the Outside Completion Date.

5. Rent Payment. Tenant agrees to pay all rents directly to Lender in accordance with the Lease immediately upon receipt of written notice from Lender or Landlord of Lender's succeeding to the Landlord's interest under the Lease or upon receipt of written notice that Lender is exercising its rights under the Mortgage or any other loan documents which secure the Note following a default by Landlord or other applicable party. Tenant shall be entitled to full credit under the Lease to the extent of all rents paid to Lender pursuant to this paragraph of this Agreement. By its signature to and consent to this Agreement, Landlord agrees to this paragraph and releases Tenant from any liability to Landlord to the extent of the payment of all rents delivered to Lender under this provision.

6. Notice of Mortgage. To the extent that the Lease shall entitle the Tenant to notice of any mortgage or security agreement, this Agreement shall constitute such notice to the Tenant with respect to the Mortgage.

7. Successor of Lender . The term "Lender" as used throughout this Agreement includes any successor, assigns or holder(s) in interest of the indebtedness secured by the Mortgage.

8. Landlord Defaults. Tenant agrees with Lender that effective as of the date of this Agreement: (i) that Tenant shall not take any steps to terminate the Lease for any default by Landlord or any succeeding owner of the Property until after giving Lender written notice of such default, stating the nature of the default and giving Lender thirty (30) days from receipt of such notice to effect a cure of the same, or if a cure cannot be effected within said thirty (30) days due to the nature of the default, Lender shall have a reasonable time to cure provided that it commences to cure within said thirty
(30) day period of time and diligently pursues such cure to completion; and (ii) that notice to the Landlord under the Lease (oral or written) shall not constitute notice to Lender.

9. No Abridgment. Nothing herein contained is intended, nor shall it be, construed to abridge or adversely affect any right or remedy of the Landlord under the Lease in the event of any default by Tenant (beyond any period given Tenant to cure such default) in the payment of rent or additional rent or in the performance of any of the terms, covenants or conditions of the Lease on Tenant's part to be performed.

10. No Amendment or Termination of Lease. Lender and Tenant agree that Tenant's interest in and obligations under the Lease shall not be (i) altered or modified without the prior written consent of Lender, which consent shall not be unreasonably withheld, delayed or conditioned if Lender determines that such amendment or modification will not materially and

adversely affect the value of the Lease as collateral security for the Note or
(ii) terminated (other than in accordance with the express terms of the Lease and this Agreement) without the prior written consent of Lender. Lender and Tenant also agree that Tenant shall neither assign the Lease or allow it to be assigned in any manner nor sublet the Demised Premises or any part thereof without the prior written consent of Lender in any situation where Landlord' s consent to any such action is required under the Lease. Lender agrees that its consent to any such assignment or subletting shall be subject to the same terms, standards and conditions as may be considered by Landlord pursuant to Section
5.2.1 of the Lease.

11. Interpretation. This Agreement may not be modified orally or in any manner other than by an agreement in writing signed by the parties hereto or their respective successors in interest. This Agreement shall inure to the benefit of and be binding upon the parties hereto, their successors and assigns, and any purchaser or purchasers at foreclosure of the Property, and their respective heirs, personal representatives, successors and assigns. This Agreement is subject to the laws of the Commonwealth of Massachusetts.

IN WITNESS WHEREOF, the parties hereto have hereunto caused this Agreement to be duly executed as of the day and year first above written.

LENDER:

By_____
Name:_____
Title:_____

TENANT:

VERTEX PHARMACEUTICALS INCORPORATED

By_____
Name:_____
Title:_____

LANDLORD:

Landlord consents to this Agreement and Landlord's obligations under Paragraph 5 hereof, as of _____, 200__.

KENDALL SQUARE, LLC

By: Lyme Properties LLC, a New Hampshire limited liability company, its Manager

By:_____ David E. Clem, Member

EXHIBIT A

DESCRIPTION OF PROPERTY
(to be provided)

EXHIBIT E

Schedule of Equipment to be Removed by Tenant
(Tenant to Provide for Landlord's Approval After Lease Execution)

EXHIBIT F

Environmental Agreement
(attached)

ENVIRONMENTAL AGREEMENT

THIS ENVIRONMENTAL AGREEMENT, ("Agreement"), is entered into as of the ____ day of January, 2001 by and between KENDALL SQUARE, LLC a Delaware limited liability company, having an address at 101 Main Street, 18th Floor, Cambridge, Massachusetts 02142 ("Landlord"), and VERTEX PHARMACEUTICALS INCORPORATED, a Massachusetts corporation, having an address of 130 Waverly Street, Cambridge, Massachusetts 02139 ("Tenant"), and is made in conjunction with a Lease dated the date hereof (the "Lease") by and between Landlord and Tenant, regarding the Lot, as described and defined in the Lease, located in Cambridge, Middlesex County, Massachusetts (the Lot is hereinafter referred to as the "Property").

RECITALS

A. Landlord is the current owner of the Property, having acquired the right, title and interest of Com/Energy Research Park Realty ("Com/Energy") in the Property, together with certain other real property (approximately ten acres of land, including the Property, hereinafter the "Cambridge Research Park Site"). In connection with the acquisition of the Cambridge Research Park Site by Landlord, Landlord entered into a Release and Indemnity Agreement and a Remediation Agreement, both of which are by and between Com/Energy and Landlord and dated August 18, 1998 (hereinafter the "Release and Indemnity Agreement" and the "Remediation Agreement"), which govern certain rights, responsibilities, releases, indemnities and remediation obligations with respect to the

Cambridge Research Park Site, including the Property.

B. Landlord and Com/Energy have made commitments to each other pursuant to the Release and Indemnity Agreement and the Remediation Agreement, including commitments with respect to the Property. These commitments include, among others, (1) the commitment by Landlord to release and indemnify Com/Energy for certain matters relating to the environmental condition of the Cambridge Research Park Site, including the Property, and the remediation thereof, and (2) the commitment by Landlord to require its lessees to agree to be bound by certain terms of the Release and Indemnity Agreement and the Remediation Agreement.

In consideration of the Recitals stated above and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and solely with respect to the Property (and no other properties), the parties agree as follows:

1. Definitions. All terms not otherwise defined herein shall have the definitions set forth in the Release and Indemnity Agreement and the Remediation Agreement, as indicated herein.

2. Release and Indemnity Agreement. A copy of the Release and Indemnity Agreement is attached hereto as Exhibit A.

(a) Release. Tenant acknowledges that it is a Releasing Party as that term is defined in the Release and Indemnity Agreement and expressly understands and agrees that the Release and Indemnity Agreement runs with the land, which includes the Property, and is binding upon Tenant, except as otherwise provided herein.

(b) Indemnity. The parties acknowledge that Paragraph 5 of the Release and Indemnity Agreement provides in part that Landlord may perform remediation and subsequent development at the Cambridge Research Park Site, including the Property, on a phased-basis and that for each such phase, the Indemnity Expiration Date (as that term is defined in the Release and Indemnity Agreement) with respect to Releasing Parties (as that term is defined in the Release and Indemnity Agreement) which are owners, successors or assigns to such remediated phases of the Cambridge Research Park Site shall occur on the later to occur of the RAO Date or the Foundation Date (as those terms are defined in the Release and Indemnity Agreement), for claims made thereafter.

Prior to the Substantial Completion Date (as such term is defined in the Lease) Landlord will deliver to Tenant (i) the certification of Landlord's Licensed Site Professional certifying that the RAO has been completed in accordance with the MCP (as hereinafter defined) with respect to the Property and (ii) an estoppel certificate of COM/Energy pursuant to Paragraph 15 of the Release and Indemnity Agreement certifying, to the best of COM/Energy's knowledge, there is no default on the part of Landlord under the Release and Indemnity Agreement and further stating that the Indemnity Expiration Date has occurred with respect to the Property.

3. Remediation Agreement. A copy of the Remediation Agreement is attached hereto as Exhibit B.

The parties acknowledge that the Remediation Agreement provides in part that: The Remediation Agreement shall be binding upon Landlord, its successors, heirs, administrators and assigns and with respect to the remediation obligations set forth therein, the Remediation Agreement shall run with the land, consisting of all or any portion of the Cambridge Research Park Site, including the Property, be binding upon any and all subsequent owners, ground tenants, and mortgagees of the Cambridge Research Park Site, including the Property, or any portion thereof or interest therein. The Remediation Agreement further provides that notwithstanding the preceding sentence, that (a) Landlord may, at its election, perform its remediation and development obligations under the Remediation Agreement in phases and (b) with respect to any subsequent owner, ground tenant or mortgagee of any such phase or any portion thereof, the remediation obligation set forth in the Remediation Agreement shall not be binding upon any such subsequent owner, ground tenant or mortgagee, provided the obligations under the Remediation Agreement have been satisfied with respect to such phase. Prior to the Substantial Completion Date Landlord shall deliver to Tenant (i) the certification of Landlord's Licensed Site Professional certifying that the RAO (as such term is defined in the MCP) has been completed in accordance with the MCP with respect to the Property and (ii) an estoppel certificate of COM/Energy pursuant to Paragraph 14 of the Remediation Agreement certifying, to the best of COM/Energy's knowledge, there is no default on the part of Landlord under the Remediation Agreement and further stating that COM/Energy has approved the RAO and that Landlord has satisfied Landlord's obligations under the Remediation Agreement with respect to the Property.

4. Landlord Indemnity of Tenant. Effective as of the date hereof, Landlord agrees to defend, hold harmless and indemnify Tenant from and against any and all claims, fees, costs, disbursements and expenses that may be imposed upon, incurred by or asserted or awarded against Tenant that relate to or arise from the presence, release or threatened release of, or the mitigation or remediation of, any Hazardous Materials (as defined herein) on, at or below the Property, including migration onto the Property from the Cambridge Research Park Site, for which Landlord is responsible or liable pursuant to the terms and provisions of the Remediation Agreement or the Release and Indemnity Agreement or for which Landlord is responsible or liable pursuant to the operation of the Massachusetts Oil and Hazardous Materials Release Prevention and Response Act, Massachusetts General Laws Chapter 21E, as amended ("Chapter

21E"). Hazardous Materials as used herein shall mean "hazardous materials" and "oils" as defined in Chapter 21E and regulations adopted pursuant to said act, including, but not limited to, the Massachusetts Contingency Plan, 310 CMR 40.0000 et seq. as amended (the "MCP") and "hazardous substances" shall mean "hazardous substances" as defined in the Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended, and regulations adopted pursuant to said act; and "hazardous wastes" as defined in the Resource Conservation and Recovery Act, as amended, the Massachusetts Hazardous Waste Management Act, Massachusetts General Laws Chapter 21C, as amended, and regulations adopted pursuant to said acts.

Landlord's obligation to indemnify Tenant as set forth in this Section 4 shall not include indemnification for any claims, fees, costs, disbursements or expenses that relate to the release or threatened release of Hazardous Materials on, at or from the Property which release or threatened release first occurs on or after the date hereof.

5. Tenant Indemnity of Landlord. Tenant, for itself and for each of the other Transferring Parties (as hereinafter defined), jointly and severally, agrees to indemnify, defend (with counsel acceptable to Landlord) and hold Landlord harmless from and against any claims, suits, causes of action, costs and fees, including attorneys' fees that may be imposed upon, incurred by or asserted or awarded against Tenant that relate to or arise from the presence, release or threatened release of any Hazardous Materials on, at or from the Property which release or threatened release is due to the act, omission or neglect of Tenant.

6. Site Access Upon MADEP Audit of RAO. The parties acknowledge that pursuant to Chapter 21E and the MCP, the Massachusetts Department of Environmental Protection ("MADEP") may perform an audit of the RAO documentation submitted to MADEP for the Property. It is the intention of the parties that in the event that such audit occurs, Landlord shall be solely responsible for providing response to such audit and shall be solely responsible for providing response to any inquiries raised by MADEP in such audit and curing any deficiencies or defects which may be revealed during such audit. Tenant hereby agrees to cooperate, at no expense to Tenant, with Landlord to the extent reasonably necessary to respond to any audit by MADEP.

7. Exhibits. The Exhibits to this Agreement are incorporated by reference as if fully set forth in this Agreement.

8. Notices. All notices and other communications given or made pursuant hereto shall be in writing and shall be deemed to have been duly given or made as of the date delivered or mailed if delivered personally or mailed by registered or certified mail (postage prepaid, return receipt requested), or sent by facsimile transmission, (confirmation received) to the parties at the following addresses and facsimile transmission numbers (or at such other number for a party as shall be specified by like notice), except that notices after the giving of which there is a designated period within which to perform an act and notices of changes of address or number shall be effective only upon receipt:

i. if to Landlord:

Kendall Square, LLC
101 Main Street, 18th Floor
Cambridge, MA 02142
Attention: Robert L. Green
Fax No. (617) 225-2133

with copies to:

Lyme Properties LLC
16 On The Common
Post Office Box 266
Lyme, NH 03678
Attention: David E. Clem
Fax No. (603) 795-4789

Gadsby Hannah LLP
225 Franklin Street
Boston, MA 02110
Attention: Leigh A. Gilligan, Esq.
Patrick C. Toomey, Esq.
Fax No. (617) 345-7050

ii. if to Tenant:

Vertex Pharmaceuticals Incorporated 130 Waverly Street
Cambridge, MA 02139
Attention: Alfred Vaz, Jr.
Fax No. (617) _____

with a copy to:

Kirkpatrick & Lockhart LLP
75 State Street
Boston, MA 02108
Attention: Paul C. Bauer, Esquire Fax No. (617) 261-3175

9. Successors and Permitted Assigns. This Agreement shall be binding upon and shall inure to the benefit of the parties to this Agreement and their successors and permitted assigns; provided, however, that this Agreement may not be assigned by Tenant without Landlord's express written consent, which shall not be unreasonably withheld if this Agreement is to be assigned in connection with an assignment of the Lease. Tenant shall further require that any party to whom Tenant assigns this Agreement acknowledge its acceptance of this Agreement (as well as said Assignee's agreement to enter into and be bound by this Agreement) in writing to Landlord. Tenant shall further require any party to whom Tenant subleases all or any portion of the Premises (as such term is defined in the Lease) to enter into and be bound by this Agreement or a similar agreement acceptable to Landlord. Tenant, its successors and assigns, and all other parties referred to in this Paragraph 9 (specifically excluding Landlord and its successors and assigns) shall be referred to herein as the "Transferring Parties".

10. No Third Party Beneficiaries. This Agreement is for the sole benefit of the parties hereto, and their permitted assigns and nothing herein expressed or implied shall give or be construed to give any person or entity, other than the parties hereto, and their permitted assigns, any legal or equitable rights hereunder.

11. Amendment or Modification. This Agreement may not be amended or modified except by an instrument in writing signed by Landlord and Tenant.

12. Drafting of Agreement. This Agreement is the joint product of the parties and each provision hereof has been subject to the mutual consultation, negotiation and agreement of those parties and shall not be construed for or against any party hereto.

13. Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of the Commonwealth of Massachusetts (without giving effect to its choice of law principles).

14. Dispute Resolution. Any dispute, controversy or claim between the parties relating to, arising out of or in connection with this Agreement (or any subsequent agreements or amendments thereto), including as to its existence, enforceability, validity, interpretation, performance, breach or damages, including claims in tort, whether arising before or after the termination of this Agreement, shall be settled only by binding arbitration pursuant to the Commercial Arbitration Rules, as then amended and in effect, of the American Arbitration Association (the "Rules"), subject to the following:

i. The arbitration shall take place in Boston, Massachusetts.

ii. There shall be three arbitrators, who shall be selected under the normal procedures prescribed in the Rules, except that one such arbitrator shall be a certified public accountant and one arbitrator (who shall chair the arbitration panel) shall be a member of the American Board of Trial Advocates or the American College of Trial Lawyers. The arbitrator so designated shall not be an employee, consultant, officer, director or stockholder of any party hereto or any affiliate of any party to this Agreement.

iii. Subject to legal privileges, each party shall be entitled to discovery in accordance with the Federal Rules of Civil Procedure.

iv. At the arbitration hearing, each party may make written and oral presentations to the arbitrator, present testimony and written evidence and examine witnesses.

v. The arbitrators' decision shall be in writing, shall be binding and final and may be entered and enforced in any court of competent jurisdiction.

vi. The arbitrators shall have the authority to grant injunctive relief and order specific performance.

vii. No party shall be eligible to receive, and the arbitrators shall not have the authority to award, exemplary or punitive damages. viii. The arbitrators shall have the authority to allocate the fees and expenses of the arbitrators and the American Arbitration Association as well as the fees and expenses of the parties based upon the arbitrators' determination as to the merits of the parties' respective position in the arbitration. If the arbitrators fail to make a specific determination as to fees and expenses, then such fees and expenses of the arbitrators and the American Arbitration Association shall be paid by the parties in equal amounts and the parties shall each bear their own fees and expenses.

ix. The arbitrators shall adhere to paragraph 13. Within 15 days after the designation of the arbitrators, the arbitrators (or chair of the arbitration panel), Tenant and Landlord shall meet, at which time Landlord and Tenant shall be required to set forth in writing all disputes, controversies or claims under and a proposed ruling on each such dispute, controversy or claim. The arbitrators (or chair of the arbitration panel) shall set a date for the arbitration hearing to discuss each dispute, controversy or claim identified by the Tenant and Landlord, which hearing shall commence no later than 30 days after the submittal of written proposals pursuant to the immediately preceding sentence. The arbitrators shall use best efforts to rule on each dispute, controversy or claim within 30 days after the completion of the arbitration hearing described in the immediately preceding sentence.

15. Counterparts. This Agreement may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which when executed shall be deemed to be an original but all of which taken together shall constitute one and the same agreement.

16. Integration. This Agreement, together with Exhibits hereto, and the documents and instruments and other agreements among the parties delivered pursuant hereto, constitute the entire agreement and supersede all prior agreements and undertakings, both written and oral, among Landlord and Tenant with respect to the subject matter hereof and are not intended to confer upon any other Person any rights or remedies hereunder, except as otherwise expressly provided herein. Without limiting the foregoing, the parties acknowledge that this Agreement shall survive the termination or expiration of the Lease. The terms of this Agreement may not be terminated, modified or waived except by a written agreement signed by Landlord and Tenant.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed under seal.

KENDALL SQUARE, LLC

By: Lyme Properties LLC, a New Hampshire limited liability company, its Manager

By:_____ David E. Clem, Member

VERTEX PHARMACEUTICALS INCORPORATED

By:_____ Name:
Title:

EXHIBIT F-1

List of Remediation Documents

o Release Abatement Measure Plan, NAPL Stabilization, Cambridge Research Park, 364 Third Street, Cambridge, prepared by ThermoRetec Consulting Corporation ("ThermoRetec") and dated March, 2000;

o Phase II - Comprehensive Site Assessment, Buildings C and D Area, Cambridge Research Park, 364 Third Street, Cambridge, prepared by ThermoRetec and dated March, 2000;

o Phase III - Remedial Action Plan, Buildings C and D Area, Cambridge Research Park, 364 Third Street, Cambridge, prepared by ThermoRetec and dated March, 2000; and

o Environmental Response, Compensation and Liability Insurance Policy issued by Kemper Environmental, Ltd. to Cambridge Research Park, LLC and The Lyme Timber Company (Policy No. 4LY000169).

Exhibit 10.26

The Company has omitted from this Exhibit portions of the Agreement for which the Company has requested confidential treatment from the Securities and Exchange Commission. The portions of the Agreement for which confidential treatment has been requested have been deleted and marked with asterisks surrounded by brackets ([****]) and have been filed separately with the Securities and Exchange Commission.

RESEARCH AGREEMENT

between

Vertex Pharmaceuticals Incorporated

and

Laboratoires Serono S.A.
Research Agreement

Table of Contents

Table of Contents (continued)

RESEARCH AGREEMENT

THIS RESEARCH AGREEMENT (the "Agreement") is made and entered into as of this 11th day of December 2000 between VERTEX PHARMACEUTICALS INCORPORATED ("VERTEX"), a Massachusetts corporation with principal offices at 130 Waverly Street, Cambridge, MA 02139-4242, and LABORATOIRES SERONO S.A. ("SERONO"), a Swiss corporation with principal offices at Zone Industrielle de l'Ouriettaz, 1170 Aubonne, Switzerland.

Introduction

WHEREAS, VERTEX has undertaken a broad drug discovery program with the objective of designing novel, small-molecule Caspase (as defined below) inhibitors as human therapeutics for a variety of clinical indications;

WHEREAS, SERONO is also interested in developing and commercializing drugs targeting Caspases and has particular expertise in

developing, marketing and selling pharmaceuticals worldwide;

WHEREAS, both parties desire to enter into a collaboration the objective of which will be to design novel, small-molecule compounds which act through inhibition of one or more Caspases, for the treatment or prevention of human disease, and to develop, market and sell those compounds as pharmaceuticals upon the terms and conditions set forth herein and in a License, Development and Commercialization Agreement identical in substance to Exhibit A hereto;

NOW THEREFORE, in consideration of the foregoing premises, the mutual covenants set forth in this Agreement, and other good and valuable consideration, the parties agree as follows:

ARTICLE I -- DEFINITIONS

1.1. "Affiliate" shall mean, with respect to any Person, any other Person which directly or indirectly controls, is controlled by, or is under common control with such Person. The term "control" means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise. Control will be presumed if one Person owns, either of record or beneficially, more than forty percent (40%) of the voting stock of any other Person.

1.2. "Bulk Drug Substance" shall mean a Drug Product Candidate in bulk crystal, powder, solution or other form suitable for incorporation in a Drug Product, which if required in order to stabilize the Drug Product Candidate shall be formulated with stabilizing excipients.

1.3. "Caspases" shall mean cysteine-proteases that cleave target proteins preferentially after an aspartic-acid residue.

1.4. "Compound" shall mean [**********
****
****
****
****
****
****
**********].

1.5. "Controlled" shall mean the legal authority or right of a party hereto to grant a license or sublicense of intellectual property rights to another party hereto, or to otherwise disclose proprietary or trade secret information to such other party, without breaching the terms of any agreement with a Third Party or misappropriating the proprietary or trade secret information of a Third Party.

1.6. "Development Election" shall have the meaning set forth in Section 3.1 hereof.

1.7. "Drug Product" shall mean a finished dosage form which is prepared from Bulk Drug Substance and is ready for administration to the ultimate consumer as a pharmaceutical.

1.8. "Drug Product Candidate" shall mean a Compound as to which SERONO has exercised its Development Election under Article III hereof and which is therefore the subject of a License Agreement in accordance with the provisions of Sections 3.2, 3.3 or 3.4 hereof.

1.9. "Effective Date" shall mean the effective date of this Agreement as set forth on the first page hereof.

1.10. "Far East" shall mean all countries set forth on Schedule 1.10 hereof.

1.11. "FDA" shall mean the United States Food and Drug Administration.

1.12. "Field" shall mean the treatment or prevention of conditions or diseases in humans using pharmaceutical products the principal mode of action of which is [**********].

1.13. "ICE" shall mean [**********]

1.14. "IND" shall mean the investigational new drug application relating to a drug product filed with the FDA pursuant to 21 C.F.R. Part 312, including any amendments thereto. References herein to IND shall include, to the extent applicable, any comparable filing(s) made with a Regulatory Authority in other countries in the Territory (such as a clinical trial exemption (CTX) in the European Union).

1.15. "Indication" shall mean a generally acknowledged disease or condition, a significant manifestation of a disease or condition, or symptoms associated with a disease or syndrome for which use of a pharmaceutical product is indicated, as customarily identified in the pharmaceutical product's label under applicable FDA regulations or the foreign equivalent thereof.

1.16. "Joint Know-How" shall have the meaning set forth in Section 7.1 of this Agreement.

1.17. "Joint Patents" shall have the meaning set forth in Section 7.1 of this Agreement.

1.18. "JRC" shall have the meaning set forth in Section 2.5 of this Agreement.

1.19. "Know-How" shall mean all Program Technology other than inventions which are the subject of Patents.

1.20. "License Agreement" shall mean a License, Development and Commercialization Agreement, identical in substance to Exhibit A hereto, to be executed by VERTEX and SERONO in conjunction with the exercise by SERONO of its Development Election with respect to a Drug Product Candidate.

1.21. "Patents" shall mean all existing patents and patent applications and all patent applications hereafter filed, including any continuation, continuation-in-part, division, provisional or any substitute applications, any patent issued with respect to any such patent applications, any reissue, reexamination, renewal or extension (including any supplementary protection

certificate) of any such patent, and any confirmation patent or registration patent or patent of addition based on any such patent, and all foreign counterparts of any of the foregoing.

1.22. "Person" shall mean any individual, corporation, partnership, association, joint-stock company, trust, unincorporated organization or government or political subdivision thereof.

1.23. "Phase II Clinical Trial" shall mean shall mean a human clinical trial conducted for inclusion in (i) that portion of the FDA submission and approval process which provides for trials of a pharmaceutical product on a limited number of patients for the purposes of collecting data on dosages, evaluating safety and collecting preliminary information regarding efficacy in the proposed therapeutic Indication, as more fully defined in 21 C.F.R. ss.312.21(b), and (ii) equivalent submissions with similar requirements in other countries in the Territory.

1.24. "Phase III Clinical Trial" shall mean a human clinical trial conducted for inclusion in (i) that portion of the FDA submission and approval process which provides for the continued trials of a pharmaceutical product on sufficient numbers of patients to generate safety and efficacy data to support Regulatory Approval in the proposed therapeutic Indication, as more fully defined in 21 C.F.R. ss. 312.21(c), and (ii) equivalent submissions with similar requirements in other countries in the Territory.

1.25. "Program Technology" shall mean all data, technical information, know-how, discoveries, inventions (whether or not patented or patentable), trade secrets, processes, techniques, materials, compositions, methods, formulas or improvements (i) invented, discovered or developed by either party hereto or its Affiliates under the Research Program, (ii) invented, discovered or developed by VERTEX prior to the Effective Date in the course of a research program directed toward the discovery of Caspase inhibitors other than inhibitors of ICE or (iii) to which VERTEX has been granted a license or otherwise received some form of right, title or interest from its Far East collaborator; that, in each case, relate to the Compounds or their manufacture or use. Notwithstanding the foregoing, the term Program Technology shall not apply to VERTEX's general drug design technology whether in software or hardware, tangible or intangible, form.

1.26. "Refused Candidate" shall have the meaning set forth in Section 3.3 hereof.

1.27. "Regulatory Approval" shall mean, with respect to any country, all authorizations by the appropriate governmental entity or entities necessary for commercial sale of a pharmaceutical product in that country including, without limitation and where applicable, approval of labeling, price, reimbursement and manufacturing. "Regulatory Approval" in the

United States shall mean final approval of a new drug application pursuant to 21 C.F.R. ss. 314 (or any successor regulation having the same purpose or effect), permitting marketing of the applicable pharmaceutical product in interstate commerce in the United States. "Regulatory Approval" in the European Union shall mean final approval of a Marketing Authorization Application pursuant to Council Directive 75/319/EEC, as amended, or Council Regulation 2309/93/EEC, as amended, or pursuant to any successor regulation having the same purpose or effect.

1.28. "Research Plan" shall have the meaning set forth in Section 2.6 hereto.

1.29. "Research Program" shall mean all research activities undertaken under this Agreement with the objective of creating, identifying, designing or evaluating Compounds as provided herein, including but not limited to activities described in the Research Plan.

1.30. "Research Year" shall mean a twelve-month period during the term of the Research Program commencing on October 1, and ending on September 30, of each year.

1.31. "SERONO Know-How" shall mean all Know-How Controlled by SERONO or its Affiliates.

1.32. "SERONO Patents" shall mean all Patents Controlled by SERONO or its Affiliates claiming Program Technology.

1.33. "SERONO Program Technology" shall mean all SERONO Patents and SERONO Know-How, including SERONO's and its Affiliates' right, title and interest in any Joint Patents and Joint Know-How.

1.34. "Territory" shall mean all countries of the world, except for the countries of the Far East identified as such on Schedule 1.10 hereto.

1.35. "Third Party" shall mean any Person that is not a party or an Affiliate of any party to this Agreement.

1.36. "VERTEX Know-How" shall mean all Know-How Controlled by VERTEX or its Affiliates.

1.37. "VERTEX Patents" shall mean all Patents Controlled by VERTEX or its Affiliates claiming Program Technology.

1.38. "VERTEX Program Technology" shall mean all VERTEX Patents and VERTEX Know-How, including VERTEX's and its Affiliates' right, title and interest in any Joint Patents and Joint Know-How.

ARTICLE II -- RESEARCH PROGRAM

2.1. Conduct of the Research Program.

2.1.1. Responsibility. VERTEX shall have principal responsibility for the conduct of the Research Program, and SERONO shall provide consultation, advice and such research effort as may be deemed appropriate by the JRC and accepted by SERONO. The JRC shall review and coordinate each party's efforts with respect to the Research Program.

2.1.2. Efforts. VERTEX will use its commercially reasonable and diligent efforts, consistent with prevailing practices within the pharmaceutical and biotechnology industries, to conduct, and as necessary to cause its agents to conduct, the Research Program, with the objective of identifying Compounds as soon as practicable which might be suitable for designation as Drug Product Candidates. VERTEX will conduct the Research Program in accordance with the terms and conditions of this Agreement, and in accordance with prevailing laboratory standards and practices where its laboratories are located, including, where applicable, the standards set forth in the current Good Laboratory Practices regulations promulgated by the FDA, published at C.F.R. Part 58, as such regulations may be amended from time to time, and equivalent foreign regulations or standards as applicable.

2.1.3. Records. VERTEX shall prepare and maintain complete and accurate written records, accounts, notes, reports and data with respect to all laboratory work conducted in the performance of the Research Program in conformity with standard pharmaceutical and biotechnology industry practices.

2.2. Term.

The Research Program shall commence as soon as practicable after the Effective Date and will conclude at the end of the fifth (5th) Research Year, unless earlier terminated in accordance with the provisions hereof. The Research Program may be extended from year

to year thereafter with the written consent of both parties.

2.3. Payment With Respect to Past Research.

SERONO will make the following payments to VERTEX, on the dates referenced below, in consideration of certain of VERTEX's past research costs, and in recognition of

VERTEX's research program relative to Caspases having achieved certain research milestones prior to the Effective Date:

1. Within thirty (30) days of the Effective Date: $3,000,000

2. On or before the first anniversary of the Effective Date: $2,000,000

2.4. Research Support Payments.

2.4.1 Payments. SERONO will make research support payments to VERTEX in the amount of [**********]for each Research Year. The first Research Year will be deemed to have commenced on October 1, 2000. Payments due for each Research Year shall be made quarterly in advance on or before October 1, January 1, April 1 and July 1, of each Research Year, except that the first quarterly payment due on or before October 1, 2000 shall be made within thirty (30) days of the Effective Date. All payments shall be made in United States dollars to the credit of such bank account as may be designated by VERTEX in writing to SERONO. Any payments which fall due on a Saturday, Sunday or date which is a legal holiday in the Commonwealth of Massachusetts may be made on the next following day which is not a Saturday, Sunday or legal holiday in the Commonwealth of Massachusetts.

2.4.2. Report. [**********
****
****
****
****
**********]

2.4.3. Withholding. SERONO has advised that the payments referenced in Section 2.3 and Section 2.4.1 above, if made to VERTEX, are currently not subject to withholding tax in Switzerland. If during the term of this Agreement, withholding tax should be required by law to be deducted from such payments, the parties will agree on an equitable division of liability for any sum which is withheld and for which VERTEX is not compensated or reimbursed by way of usable tax credits or otherwise.

2.5. Joint Research Committee.

2.5.1. Composition and Purposes. VERTEX and SERONO will establish within thirty (30) days of the Effective Date a Joint Research Committee ("JRC") which shall consist of at least six (6) representatives (as may be increased or decreased by the JRC), half of whom shall be designated from time to time by each party. Meetings of the JRC other than regularly scheduled quarterly meetings may be held only if a quorum of at least two (2) representatives of each party participates; except that lack of a quorum shall not prevent the scheduling and conduct of a meeting by either party after that party has made good faith but unsuccessful attempts for more than ninety (90) days to schedule and convene the meeting. The JRC shall meet formally at least quarterly, or with such other frequency, and at such time and location, as may be established by the JRC, for the following purposes:

(i) To receive and review reports by VERTEX and its project teams, and by SERONO if it is conducting research under the Research Plan, which shall be prepared and submitted to the other party and to the JRC on a quarterly basis within fifteen (15) days after the end of each calendar quarter (commencing with the calendar quarter ending December 31, 2000), summarizing data and information generated under the Research Plan and other progress with respect thereto. The first such report provided by VERTEX will provide information regarding all Compounds invented, discovered or developed by VERTEX prior to the Effective Date in the course of a research program directed toward the discovery of Compounds, and that data will be updated in subsequent reports to reflect new Compounds invented, discovered or developed by VERTEX since the date of the last report;

(ii) To coordinate and review research activity and interactions between VERTEX and SERONO;

(iii) To review any Compounds proposed by either party for development;

(iv) To review, consider and approve revisions to the Research Plan;

(v) To periodically review the overall goals and strategy of the Research Program and to consider whether redirection or termination of the Research Program should be recommended under Section 2.9 hereof; and

(vi) To discuss matters relating to Patents claiming Program Technology.

VERTEX will prepare the initial draft of an agenda for each JRC meeting and will submit the draft to SERONO for comments a reasonable period before the scheduled meeting

date. The party hosting a particular JRC meeting shall prepare and deliver to the members of the JRC, within thirty (30) days after the date of each meeting, minutes of such meeting setting forth, among other things, all decisions of the JRC, and including a summary of the status of research work as reported to the JRC. The party not preparing the minutes may suggest changes or amendments to the minutes, and may provide a supplement addressing activities at the meeting which are not reported in the minutes, which shall be distributed to the parties and filed with the meeting minutes. In case the JRC meets by means of telephone or video conferences, the responsibility for preparing minutes shall lie with VERTEX.

2.5.2. Decision Making.

(i) Each of VERTEX and SERONO shall have one vote on the JRC. The objective of the JRC shall be to reach agreement by consensus on all matters within the scope of the Research Plan. However, in the event of a deadlock with respect to any action (which shall be deemed to have occurred if either party shall request a vote of the JRC on a matter and that vote shall either not be taken within thirty (30) days of the request or if taken shall result in a tie vote),
[**********
**********].

(ii) Each party shall retain the rights, powers, and discretion granted to it under this Agreement, and the JRC shall not be delegated or vested with any such rights, powers or discretion except as expressly provided in this Agreement. The JRC shall not have the power to amend or modify this Agreement, which may only be amended or modified as provided in
Section 11.14 hereof.

2.6. Research Plan.

2.6.1. General. By the end of the first meeting of the JRC, VERTEX and SERONO shall agree upon (i) an outline research plan (the "Research Plan") for identifying, conceiving, synthesizing, structurally characterizing, testing, evaluating and otherwise discovering one or more Compounds that the parties believe to be commercially viable candidates for development; and (ii) as a component of the Research Plan, a detailed research plan for the first Research Year, including an appropriate schedule therefor.

2.6.2. Plan Review and Approval. The Research Plan will be revised and updated by VERTEX at least annually and submitted to the JRC for its review and approval.

VERTEX, in revising and updating the Research Plan, will take into account material scientific and commercial developments relevant to the objectives of the Research Program.

2.7. Exchange and Use of Information.

2.7.1. Review of Research. Each party will enable any representatives of the other party on the JRC, or other authorized representatives of such party, to review the ongoing research being conducted by the first party under the Research Program and to discuss that research with its officers, all at such reasonable times and as often as may be reasonably requested. The parties also shall institute periodic working meetings between scientists from VERTEX and SERONO, to enhance the coordination and application of each party's resources and to provide an effective vehicle for sharing and exchanging Research Program results. Representatives of VERTEX or SERONO (including for this purpose agents) receiving Confidential Information (as defined in Section 4.1) from representatives of the other party, and any representatives of one party who may by agreement participate in an exchange of scientists with the other party, or who may otherwise spend a significant period of time at the laboratories of the other party, shall sign appropriate agreements ensuring that information disclosed to them is held in confidence in accordance with the provisions of Article IV of this Agreement.

2.7.2. Far East Collaborator. VERTEX's agreement with its Far East collaborator for development and sale of Compounds in the Far East obligates each party to share with the other party information which is relevant to the research and development of Compounds. VERTEX will share with SERONO information received by it from its Far East collaborator pursuant to the foregoing, in consideration of the reciprocal right hereby granted to VERTEX by SERONO to share information received by it from SERONO with VERTEX's Far East collaborator, relative to the research and development of Compounds in the Territory.

2.8. Ownership of Program Technology.

2.8.1. No Ownership by Employees. All employees of VERTEX and SERONO who are expected to participate in the Research Program have signed, or before any such participation will sign, agreements with VERTEX or SERONO, respectively, regarding proprietary information and inventions, in a form reasonably considered by the employer and its counsel to assure the employer's Control of Program Technology invented, discovered or developed by such employees.

2.8.2. No Ownership by Agents. VERTEX and SERONO shall each enter into customary agreements with its agents that provide that all of such agents' right, title and interest

in, to and under any Program Technology invented, discovered or developed by such agents shall be assigned or licensed to VERTEX or SERONO as the case may be.

2.9. Redirection or Termination of Research Program.

If at any time during the term of this Agreement, the JRC shall determine in good faith (i) that the Research Program or any portion thereof is not likely to be successfully completed or if so completed is not likely to produce Compounds that are commercially viable, or (ii) that in other material respects the Research Program will not conform to the parties' reasonable expectations when entering into this Agreement, then the JRC may suggest revision, reorientation or termination of the Research Program to each party's top management, and upon mutual consent VERTEX and SERONO shall thereafter promptly modify their respective activities in connection with the Research Program, or terminate the Research Program, accordingly.

2.10. Research Exclusivity.

2.10.1. Conduct of Research and Development. Neither VERTEX nor SERONO nor any of their respective Affiliates will conduct research or development activities in the Field during the term of the Research Program (except, as to VERTEX, activities conducted with its collaborator in the Far East) other than pursuant to the provisions of this Agreement. Neither VERTEX nor SERONO will enter into any agreement with a Third Party which would prevent it from performing its obligations under this Agreement.

2.10.2. In-Licensing Opportunity. Notwithstanding the foregoing, if a Third Party offers SERONO the opportunity to license and develop a chemical compound for which an IND has been accepted by the relevant Regulatory Authority (an "In-Licensed Compound") in the Field in any country in the Territory (an "In-Licensing Opportunity"), then prior to accepting any such In-Licensing Opportunity SERONO will provide VERTEX with all material information in its possession concerning the In-Licensing Opportunity and will offer VERTEX the opportunity to share the In-Licensing Opportunity with SERONO on the following basis:

(i) [**********
****
****
****

****
****
****
**********]

(ii) [**********
****
****
****
**********]

(iii) [**********
****
**********]

(iv) VERTEX shall not be required to accept the In-Licensing Opportunity offered by SERONO, and shall be deemed to have declined the In-Licensing Opportunity if it shall not have accepted the In-Licensing Opportunity by notice in writing to SERONO within sixty (60) days after VERTEX's receipt of the information relative to the In-Licensing Opportunity referenced in the first sentence of this Section 2.10.2. If VERTEX does not accept the In-Licensing Opportunity, it shall have no responsibility to, and will be entitled to

no payment or other benefits from, SERONO or the Third Party in connection with the In-Licensing Opportunity. If VERTEX does accept the In-Licensing Opportunity, VERTEX and SERONO will negotiate an agreement with respect to such In-Licensing Opportunity incorporating applicable provisions of the License Agreement as well as such other customary representations, warranties, covenants and conditions as are necessary or appropriate for transactions of this type, not inconsistent with the terms and conditions hereof and satisfactory in form and substance to the parties and their legal advisors.

[**********
**********]

[**********
**********]

ARTICLE III -- LICENSE, DEVELOPMENT AND COMMERCIALIZATION RIGHTS

3.1. License and Development Election.

VERTEX hereby grants to SERONO (i) a nonexclusive license and/or sublicense in the Territory under VERTEX Program Technology to exercise its rights and fulfill its obligations under this Agreement, and (ii) an exclusive right, exercisable as set forth in Sections 3.2, 3.3 and 3.4 and otherwise subject to the provisions of this Agreement (the "Development Election"), to license one or more Compounds and to develop, manufacture and have manufactured, use, sell, offer to sell, and import Bulk Drug Substance, Drug Product Candidates and Drug Products incorporating those Compounds in the Territory, upon the terms and conditions set forth in a License Agreement. VERTEX will not grant to any Third Party rights to VERTEX Program Technology which are inconsistent with the grant of the Development Election to SERONO under this Article III.

The Development Election, and the included right to license Compounds, shall expire and SERONO shall no longer have the right to license any Compounds not theretofore the subject of a Development Election and License Agreement, upon the first to occur of:

(i) Termination of the Research Program by VERTEX for cause under Section 8.3 hereof;

(ii) [**********]following termination of the Research Program by SERONO for cause under Section 8.2 hereof; and

(iii) [**********]following the Final Report Date under Section 3.4, following expiration of the five-year term of the Research Program or its early termination under Section 8.4 hereof.

Notwithstanding the foregoing, (a) if a Selection Notice or Second Opportunity Notice with respect to a Proposed Candidate is provided by VERTEX to SERONO under Sections 3.2.1 or 3.3.1 below prior to expiration of the Development Election as provided above, then the Development Election with respect to that Proposed Candidate shall not expire until the end of the Notice Period or Second Opportunity relative to that Proposed Candidate as specified in Sections 3.2.1 or 3.3.1, as applicable; and (b) the Development Election with respect to certain

Refused Candidates shall survive termination or expiration of the Research Program as provided in Section 3.3.2 below.

3.2. Exercise of Development Election.

3.2.1. Exercise. VERTEX will notify SERONO as soon as VERTEX has selected a Compound for formal pre-clinical development hereunder (each, a "Proposed Candidate"). Along with that notice (the "Selection Notice"), VERTEX will also provide SERONO and

the JRC with all material information known to VERTEX at the time of the Selection Notice (the "Selection Information"), including analysis results and raw data, which could be material to SERONO's decision whether to exercise its Development Election with respect to the Proposed Candidate. Any Compound proposed by VERTEX for development will meet the minimum development criteria set forth on Schedule 3.2 to this Agreement. As to any Proposed Candidate SERONO may exercise its Development Election and select that Proposed Candidate for development (a "Drug Product Candidate") by delivery to VERTEX, within [**********] after receipt of the Selection Information with respect to the Proposed Candidate (the "Notice Period"), of written notice of exercise of its Development Election with respect to that Proposed Candidate. The parties shall then promptly execute a License Agreement with respect to that Drug Product Candidate. SERONO shall not be obligated but shall have complete discretion to determine whether to exercise its Development Election with respect to any Proposed Candidate.

3.2.2. Failure to Exercise. Subject to the provisions of Section 3.3 below, the Development Election with respect to any Proposed Candidate will expire at 5:00 P.M. Boston time on the last day of the Notice Period with respect to that Proposed Candidate, unless SERONO prior to that time has exercised its Development Election in accordance with this Agreement.

3.3. Refused Candidate.

3.3.1. Second Opportunity. If SERONO does not exercise the Development Election with respect to a Proposed Candidate during the Notice Period referenced in Section 3.2 above, then the Development Election shall expire as provided in Section 3.2.2 with respect to that Proposed Candidate (which shall then become a "Refused Candidate" hereunder) subject to the proviso set forth below, and VERTEX will thereafter be free to develop and commercialize the Refused Candidate at its expense free of any further obligation to SERONO hereunder except as set forth below, including the obligation to submit information concerning

that Refused Candidate for review by the JRC; provided that VERTEX will not enter into any agreement with a Third Party to develop or commercialize the Refused Candidate prior to [**********]. If VERTEX continues development of the Refused Candidate it will notify SERONO [**********] of its decision to do so. VERTEX will thereafter notify SERONO in writing after VERTEX has received all material data from its Phase II Clinical Trials of that Refused Candidate for the initial Indication tested (the "Second Opportunity Notice"). [**********] SERONO may request and VERTEX will promptly provide to SERONO all analysis results and raw data available at the time of the request which are material to, and will form the basis for, VERTEX's decision to commence its first Phase III Clinical Trial or other pivotal registration study (or to file for Regulatory Approval, if an application for Regulatory Approval is planned based on data from the Phase II Clinical Trial alone) with respect to the Refused Candidate (the "Development Information"). VERTEX will also provide to SERONO as part of the Development Information with respect to the Refused Candidate, a detailed schedule of the development costs incurred by VERTEX with respect to the development of that Refused Candidate to date, including all direct and indirect costs associated with preclinical studies, clinical trials, manufacturing of drug substance and drug product, scale-up and formulation research, and regulatory activities, but excluding any allocation of corporate overheads, determined in a manner not at variance with Generally Accepted Accounting Principles (GAAP), International Accounting Standards (IAS) and the party's usual practices. During [**********], SERONO shall have the right to exercise the Development Election with respect to that Refused Candidate; except that the provisions of Article VII of the License Agreement shall be applicable to any Drug Product Candidate which is licensed at the Second Opportunity. SERONO's right to exercise the Development Election with respect to any Refused Candidate at the Second Opportunity [**********] with respect to that Refused Candidate. If SERONO exercises the Development Election, the parties shall then promptly execute a License Agreement. SERONO shall not be obligated but shall have complete discretion to determine whether to exercise its Development Election with respect to any Refused Candidate.

3.3.2. Rights Upon Expiration or Termination of the Research Program. (a) If the Research Program expires in the ordinary course at the end of the term provided in Section

2.2 hereof or SERONO terminates this Agreement [**********], prior to the completion of Phase II Clinical Trials with respect to a Refused Candidate, VERTEX will include with the Final Report provided under Section 3.4 hereof all material information known to VERTEX as of the end of the Final Report Period relative to the Refused Candidate and its suitability as a Drug Product Candidate. SERONO may thereafter exercise the Development Election with respect to that Refused Candidate on or before [**********], and in such event the Development Election will be deemed to have been exercised by SERONO with respect to that Refused Candidate at the Second Opportunity, with the consequences provided in Section 3.3.1 and under the License Agreement with respect to that Candidate.

(b) If the Research Program expires in the ordinary course at the end of the five-year term provided in Section 2.2 hereof, or is terminated by SERONO [**********],then SERONO will nevertheless retain the right after termination of this Agreement: to receive a Second Opportunity Notice from VERTEX, as provided in Section 3.3.1, with respect to any Refused Candidates as to which the Development Election was not exercised by SERONO under Subsection 3.3.2(a) above; to receive the Development Information with respect to that Refused Candidate as provided in Section 3.3.1; and to exercise the Development Election with respect to that Refused Candidate notwithstanding termination or expiration of this Agreement generally, all as if this Agreement were still in full force and effect with respect to that Refused Candidate.

3.3.3. [[**********]VERTEX's right to develop and commercialize a Refused Candidate pursuant to Section 3.3.1 shall not apply to
[**********

[**********]

3.4. Final Report Election.

3.4.1. Final Report Period. Upon expiration of the Research Program in the ordinary course at the end of the five-year term provided in Section 2.2 hereof ("Normal Expiration"), or upon early termination of the Research Program by SERONO under Section 8.4 hereof at the end of the second Research Year or at the end of the fourth Research Year ("Early Termination"), VERTEX will submit a final report (the "Final Report") to the JRC and SERONO which will cover the period beginning on the Effective Date and ending in the case of Normal Expiration on the [**********]following expiration of the Research Program and in the case of Early Termination, on the [**********]following the effective date of termination of the Research Program (in each case, the "Final Report Period"), and which will contain all material information known to VERTEX, and not previously reported to the JRC and SERONO, relative to Compounds invented, discovered or developed during the Final Report Period. To the extent that it is conducting research relative to Compounds, SERONO will provide a similar report to VERTEX and the JRC. The Final Report will be delivered within [**********]after the end of the Final Report Period and the date upon which it is delivered will be called the "Final Report Date."

3.4.2. Election. Under the Development Election, SERONO shall also have the right (the "Final Report Election"), exercisable by delivery of written notice (a "Final Report Election Notice") to VERTEX at any time during the [**********]period following the Final Report Date, to select any Compound or Compounds (each, a "Final Report Compound") not previously

designated for development by VERTEX for immediate development under the terms of a License Agreement; provided, that [**********]SERONO will provide with the Final Report Election Notice a proposed development plan and estimated budget for each Final Report Compound. Within [**********]after receipt of the Final Report Election Notice, VERTEX shall notify SERONO in writing whether (a) it accepts the Final Report Compound for development, in which case development of that Compound shall proceed as if it were originally proposed by VERTEX and accepted for development by SERONO under Section 3.2.1 hereof; or (b) it chooses not to join

SERONO in development and commercialization of that Final Report Compound, in which case the parties shall execute and deliver a License Agreement and SERONO shall proceed with development of that Compound (a "Final SERONO Candidate") under Article VII of the License Agreement.

3.5. SERONO Licenses.

3.5.1. Grant. Subject to SERONO's rights under this Agreement and any License Agreement, SERONO hereby grants to VERTEX (a) a royalty-free, exclusive, worldwide license and/or sublicense, with the right to further sublicense, to SERONO's interest (and the interest of SERONO's Affiliates) in any Joint Patent claiming a Compound or the uses or methods of manufacture thereof; and (b) a royalty-free, non-exclusive, worldwide license and/or sublicense, with the right to further sublicense, under all other SERONO Program Technology claiming a Compound or the uses or methods of manufacture thereof. The foregoing licenses and rights to further sublicense shall extend only to making, having made, using, selling, offering to sell and importing Compounds and pharmaceutical products incorporating Compounds. SERONO retains all rights to SERONO Program Technology except to the extent explicitly granted to VERTEX hereunder.

3.5.2. Sublicensees. VERTEX shall guarantee and be responsible to SERONO for the performance of any of its sublicensees under any sublicense with respect to the rights granted to VERTEX by SERONO and the obligations assumed by VERTEX hereunder. VERTEX shall not permit any sublicensees to use SERONO Program Technology without provisions safeguarding confidentiality equivalent to those provided in this Agreement. Any

such provisions will allow SERONO the right to directly enforce the obligations of confidentiality with respect to SERONO Program Technology in the possession of the sublicensee.

ARTICLE IV -- CONFIDENTIALITY

4.1. Undertaking.

Each party shall keep confidential and, other than as provided herein, shall not disclose, directly or indirectly, any trade secrets, other knowledge, information, documents or materials owned or Controlled by the other party which have been disclosed (in tangible or electronic form or as evidenced by meeting minutes or similar materials) to such party after the Effective Date and designated confidential by the disclosing party (any such information, "Confidential Information"). All Program Technology shall be deemed Confidential Information. Neither VERTEX nor SERONO shall use such Confidential Information of the other party for any purpose, including the filing of patent applications containing such information, without the other party's consent (which shall not be unreasonably withheld), other than for conducting the Research Program or as otherwise permitted under this Agreement.

4.1.1. Nondisclosure and Nonuse. Each party shall take any and all lawful measures to prevent the unauthorized use and disclosure of such Confidential Information, and to prevent unauthorized persons or entities from obtaining or using such Confidential Information.

4.1.2. Disclosure to Affiliates and Agents. Each party will refrain from directly or indirectly taking any action which would constitute or facilitate the unauthorized use or disclosure of such Confidential Information. Each party may disclose such Confidential Information to its Affiliates, their officers, employees and agents, to authorized licensees and sublicensees (including VERTEX's Far East collaborator as provided in Section 2.7 hereof), and to subcontractors in connection with the development of a Drug Product Candidate or the manufacture of Bulk Drug Substance, or Drug Products, but only to the extent necessary to enable such parties to perform their obligations hereunder or under the applicable license, sublicense or subcontract, as the case may be; provided, that such officers, employees, agents, licensees, sublicensees and subcontractors have entered into appropriate confidentiality agreements for secrecy and non-use of such Confidential Information.

4.1.3. Liability. Each party shall be liable for any unauthorized use and disclosure of such Confidential Information by its Affiliates, officers, employees and agents and any such licensees, sublicensees and subcontractors.

4.2. Exceptions.

Notwithstanding the foregoing, the provisions of Section 4.1 hereof shall not apply to Confidential Information which the receiving party can conclusively establish:

(i) has entered the public domain without such party's or its Affiliates' breach of any obligation owed to the disclosing party;

(ii) is permitted to be disclosed by the prior written consent of the disclosing party;

(iii) has become known to the receiving party or any of its Affiliates from a source other than the disclosing party, other than by breach of an obligation of confidentiality owed to the disclosing party;

(iv) is disclosed by the disclosing party to a Third Party without restrictions on its disclosure;

(v) is independently developed by the receiving party or its Affiliates without use of or reference to the Confidential Information; or

(vi) is required to be disclosed by the receiving party to comply with applicable laws or regulations or to defend or prosecute litigation, provided that the receiving party takes reasonable and lawful actions to avoid or minimize the degree of such disclosure and to have confidential treatment accorded to any Confidential Information disclosed, and provides prior written notice to the disclosing party within a time period sufficiently prior to such disclosure to permit the disclosing party to apply for a protective order or take other appropriate action to restrict disclosure. The receiving party shall fully cooperate with the disclosing party in connection with the disclosing party's efforts to obtain any such remedy.

4.3. Publicity.

The parties will agree upon the timing and content of any initial press release or other public communications relating to this Agreement and the transactions contemplated herein.

Except to the extent already disclosed in that initial press release or other public communication, no public announcement concerning the existence or the terms of this Agreement or concerning the transactions described herein shall be made, either directly or indirectly, by VERTEX or SERONO, except as may be legally required by applicable laws, regulations, or judicial order, without first obtaining the approval of the other party and agreement upon the nature, text, and timing of such announcement, which approval and agreement shall not be unreasonably withheld. If in the reasonable opinion of a party's legal

counsel, such a public announcement is legally required by applicable laws, regulations or judicial order, then the disclosing party will provide the other party notice reasonable under the circumstances of such intended announcement, and to the extent feasible under the circumstances will consult with the other party relative to the nature and scope of such intended announcement.

In addition to the foregoing restrictions on public disclosure, if VERTEX concludes that a copy of this Agreement must be filed with the U.S. Securities and Exchange Commission, it will provide SERONO with a copy of the Agreement showing any sections as to which VERTEX proposes to request confidential treatment, will provide SERONO with an opportunity to comment on any such proposal and to suggest additional portions of the Agreement for confidential treatment, and will take SERONO's reasonable comments into consideration, before filing the same.

4.4. Survival.

The provisions of this Article IV shall survive the termination of this Agreement and shall extend for a period of [**********] thereafter.

ARTICLE V -- PUBLICATION

Each of SERONO and VERTEX reserves the right to publish or publicly present the results (the "Results") of the Research Program, subject to the following terms and conditions. The party proposing to publish or publicly present the Results (the "Publishing Party") will submit a draft of any proposed manuscript, abstract or speech to the other party (the "Non-publishing Party") for comments at least [**********]prior to submission for publication or oral presentation. The Non-publishing Party shall notify the Publishing Party in writing within [****** **********]of receipt of such draft whether such draft contains (i) information of the Non-publishing Party which it considers to be confidential under the provisions of Article IV hereof, (ii) information that if published would have an adverse effect on a patent application covering the subject matter of this Agreement, or (iii) information which the Non-publishing Party reasonably believes would be likely to have a material adverse impact on the development or commercialization of a Compound, a Drug Product Candidate or a Drug Product. In any such notification, the Non-publishing Party shall indicate with specificity its suggestions regarding the manner and degree to which the Publishing Party may disclose such information. In the case of item
(i) above, no party may publish Confidential Information of the other party without its consent in violation of Article IV of this Agreement. In the case of item (ii) above, the Non-

publishing Party may request a delay and the Publishing Party shall delay such publication or presentation, for a period not exceeding [**********], to permit the timely preparation and filing of a patent application or an application for a certificate of invention on the information at issue. In the case of item (iii) above, if the Publishing Party shall disagree with the Non-publishing Party's assessment of the impact of the publication or presentation, then the issue shall be referred by the Publishing Party to the JRC for resolution. If the JRC is unable to reach agreement on the matter within [**********] after such referral, then the matter, if it involves the disclosure of confidential structural information with respect to a Compound, shall be referred to the Chief Executive Officers of SERONO and VERTEX, or to other members of senior management of such parties who report directly to their respective Chief Executive Officers, who shall attempt in good faith to reach a fair and equitable resolution of this disagreement. If the disagreement is not resolved in this manner within [**********] after referral to the JRC or (as to publications or presentations involving structural information) referral to the Chief Executive Officer of each party or his designee, as aforesaid, then the Chief Executive Officer of the Publishing Party shall notify the Chief Executive Officer of the Non-publishing Party of the decision of the Publishing Party as to publication or presentation of any information generated by it, subject always to the confidentiality provisions of Article IV hereof. This decision shall be final, provided that such decision shall be made with reasonable regard for the interests of the Non-publishing Party and provided further that no decision shall be made to publish or present information the publication or presentation of which would have a material adverse effect on the commercial prospects of any Drug Candidate or Drug Product. The parties agree that authorship of any publication or presentation will be determined based on the customary standards then being applied in the relevant scientific journal or conference. The parties will require any agents conducting the Research Program on their behalf to comply with publication and presentation restrictions comparable to those set forth herein.

This Article V shall terminate with the termination of this Agreement, but the provisions of Article IV hereof shall continue to govern the disclosure by one party, whether by publication or otherwise, of Confidential Information of the other, during the period set forth in Section 4.4.

ARTICLE VI -- INDEMNIFICATION

6.1. Indemnification by VERTEX.

VERTEX will indemnify and hold SERONO and its Affiliates, and their employees, officers and directors harmless from and against any loss, damage, action, suit,

claim, demand, liability, judgment, cost or expense (a "Loss") that may be brought, instituted or arise against or be incurred by such Persons to the extent such Loss is based on or arises out of:

(i) [**********
****
****
****
**********]

(ii) the breach by VERTEX of any of its covenants, representations or warranties set forth in this Agreement; and

(iii) provided however, that the foregoing indemnification and hold harmless obligation shall not apply to any Loss to the extent such Loss is caused by the negligent or willful misconduct of SERONO or its Affiliates.

6.2. Indemnification by SERONO.

SERONO will indemnify and hold VERTEX, and its Affiliates, and their employees, officers and directors harmless from and against any Loss that may be brought, instituted or arise against or be incurred by such Persons to the extent such Loss is based on or arises out of:

(i) [**********
****
****
****
**********]

(ii) the breach by SERONO of any of its covenants, representations or warranties set forth in this Agreement; and

(iii) provided that the foregoing indemnification and hold harmless obligation shall not apply to any Loss to the extent such Loss is caused by the negligent or willful misconduct of VERTEX or its Affiliates.

6.3. Claims Procedures.

Each Party entitled to be indemnified by the other Party (an "Indemnified Party") pursuant to Section 6.1 or 6.2 hereof shall give notice to the other Party (an "Indemnifying Party") promptly after such Indemnified Party has actual knowledge of any threatened or asserted claim as to which indemnity may be sought, and shall permit the Indemnifying Party to assume the defense of any such claim or any litigation resulting therefrom; provided:

(i) That counsel for the Indemnifying Party, who shall conduct the defense of such claim or any litigation resulting therefrom, shall be approved by the Indemnified Party (whose approval shall not unreasonably be withheld) and the Indemnified Party may participate in such defense at such party's expense (unless (i) the employment of counsel by such Indemnified Party has been authorized by the Indemnifying Party; or (ii) the Indemnified Party shall have reasonably concluded that there may be a conflict of interest between the Indemnifying Party and the Indemnified Party in the defense of such action, in each of which cases the Indemnifying Party shall pay the reasonable fees and expenses of one law firm serving as counsel for the Indemnified Party, which law firm shall be subject to approval, not to be unreasonably withheld, by the Indemnifying Party);

(ii) The failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations under this Agreement to the extent that the failure to give notice did not result in harm to the Indemnifying Party;

(iii) No Indemnifying Party, in the defense of any such claim or litigation, shall, except with the approval of each Indemnified Party which approval shall not be unreasonably withheld, consent to entry of any judgment or enter into any settlement which (i) would result in injunctive or other relief being imposed against the Indemnified Party; or (ii) does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect to such claim or litigation. The Indemnified Party shall have no right to settle or compromise any such claim or litigation without the Indemnifying Party's prior written consent; and

(iv) Each Indemnified Party shall furnish such information regarding itself or the claim in question as an Indemnifying Party may reasonably request in writing and shall be reasonably required in connection with the defense of such claim and litigation resulting therefrom.

ARTICLE VII -- PROGRAM TECHNOLOGY

7.1. Ownership.

All Program Technology invented exclusively by either party or its Affiliates (directly or through others acting on its behalf) shall be owned and Controlled by such party or its Affiliates, subject to the provisions of this Agreement. Program Technology invented jointly shall be owned and Controlled jointly by the parties or their Affiliates, subject to the provisions of this Agreement. Inventorship shall be determined in accordance with United States patent and other applicable laws. All Know-How otherwise developed or discovered exclusively by either party or its Affiliates (directly or through others acting on its behalf) shall be owned and Controlled by such party or its Affiliates, subject to the provisions of this Agreement. Know-How otherwise developed or discovered jointly shall by owned and Controlled jointly by the parties or their Affiliates, subject to the provisions of this Agreement. Know-How that is owned and Controlled jointly by the parties or their Affiliates shall be "Joint Know-How" and Program Technology invented jointly and therefore owned and Controlled jointly by the parties or their Affiliates, and which is the subject of a Patent, shall be "Joint Patents."

7.2. Patent Procurement, Maintenance and Defense.

7.2.1. Procurement and Maintenance. VERTEX shall take responsibility for the preparation, filing, prosecution and maintenance of all VERTEX Patents, and any Joint Patents, and SERONO shall be responsible for the preparation, filing, prosecution and maintenance of all SERONO Patents, in each case after consulting from time to time with the other party and the JRC with respect thereto and providing an opportunity for such other party and the JRC to comment. The filing party, with the advice of the other party, shall determine the countries in which applications will be filed. VERTEX shall furnish SERONO with copies of all substantive communications between VERTEX and applicable patent offices regarding the Joint Patents. VERTEX and SERONO shall each provide the JRC with periodic reports listing, by name, any such Patents filed by it in the United States or the European Union, along

with a general summary of the claims made and the jurisdictions of filing in the Territory. Each party will provide such assistance as the other party may reasonably request in order to protect the other party's rights to Patents for which it is responsible under this Section 7.2.

7.2.2 Defense. If either party learns of (i) any infringement or potential infringement of a Joint Patent by a third party in the Territory and/or (ii) any claim by a third party that a Joint Patent is invalid in the Territory, it shall promptly notify the other party and the

parties shall then agree upon a course of action with respect to such infringement or claim. VERTEX agrees to take reasonable actions to protect VERTEX Patents from infringement and from unauthorized possession or use. If VERTEX chooses not to prosecute an infringement action in connection with any alleged infringement or potential infringement of a VERTEX Patent or defend a claim that a VERTEX Patent is invalid in the Territory, and its decision in that regard is reasonably likely to have a material adverse impact on the value of SERONO's rights under this Agreement, then SERONO may prosecute such action or defend such claim at its own expense. VERTEX shall in such event give SERONO reasonable assistance and authority to prosecute such action or defend such claim and shall if necessary consent to be joined as a party plaintiff. In the event SERONO undertakes any such prosecution or defense, then SERONO shall be entitled to withhold up to [**********]of the payments otherwise thereafter due VERTEX pursuant this Agreement and/or any License Agreement then in effect and apply the same toward reimbursement of SERONO's litigation-related cost and expenses, including without limitation reasonable attorney's fees in connection with such prosecution or defense.

7.3. Costs.

[**********
****
****
**********except that the provisions of a License Agreement governing responsibility and sharing of costs for VERTEX Patents and SERONO Patents covering Program Technology licensed thereunder will supercede any contrary provisions of this Article VII with respect to those Patents as and from the time that such License Agreement becomes effective. [**********
**********] subject to the provisions set forth below. Either party may at any time elect, by written notice to the other party, to discontinue support for one or more such Joint Patents (a "Discontinued Patent") and shall not be responsible for any costs relating to a Discontinued Patent which are incurred more than [**********]after receipt of that notice by the other party. In such case, the other party may elect at its sole discretion to continue preparation, filing, prosecution or maintenance of the Discontinued Patent at its sole expense. The party so continuing shall own any such Discontinued Patent, and the party electing to discontinue support shall execute such documents of transfer or assignment and perform such acts as may be reasonably necessary to transfer sole ownership of the

Discontinued Patent to the other party and enable that party to file or to continue prosecution or maintenance of such Discontinued Patent, if the other party elects to do so. In the event VERTEX elects to discontinue support for a Discontinued Patent, the license granted to VERTEX by SERONO pursuant to Section
3.5 hereof shall terminate with respect to that Discontinued Patent. Discontinuance may be on a country-by-country basis or for a Patent series in total.

7.4. No Implied Rights.

Except as expressly provided in this Agreement, no right or license to use any intellectual property of either party is granted hereunder by implication or otherwise.

ARTICLE VIII -- TERM AND TERMINATION

8.1. Term.

This Agreement will extend until the occurrence of the earliest event giving rise to expiration of the Development Election under Section 3.1 hereof, unless the Agreement is extended by mutual agreement of the parties.

8.2. Termination of the Research Program by SERONO for Cause.

Upon written notice to VERTEX, SERONO may at its sole discretion terminate the Research Program and this Agreement upon the

occurrence of any of the following events:

(i) VERTEX shall breach any of its material obligations under this Agreement, and such breach shall not have been remedied or steps initiated to remedy the same to SERONO's reasonable satisfaction, within sixty (60) days after SERONO sends notice of breach to VERTEX; or

(ii) VERTEX shall cease to function as a going concern by suspending or discontinuing its business for any reason except for interruptions caused by Force Majeure.

In the event of any termination under this Section 8.2, SERONO shall not be required to make any payments under Sections 2.3 or 2.4 hereof which are not due and payable prior to receipt by VERTEX of the notice of breach referenced under Section 8.2(i) or receipt by VERTEX of the notice of termination pursuant to Section 8.2(ii), as the case may be. Within fifteen (15) days of the effective date of such termination, VERTEX will provide to SERONO and the JRC a description of any Compounds not previously disclosed to SERONO and the JRC as well as all material information known to VERTEX, including analysis results and raw data, which could be material to SERONO's decision pursuant to Section 3.1 whether to exercise its Development Election with respect to such a Compound.

8.3. Termination of the Research Program by VERTEX for Cause.

Upon written notice to SERONO, VERTEX may at its sole discretion terminate the Research Program and this Agreement upon the occurrence of any of the following events:

(i) SERONO shall breach any of its material obligations under this Agreement, and such breach shall not have been remedied or steps initiated to remedy the same to VERTEX's reasonable satisfaction, within sixty (60) days after VERTEX sends notice of breach to SERONO; or

(ii) SERONO shall cease to function as a going concern by suspending or discontinuing its business for any reason except for interruptions caused by Force Majeure.

8.4. Early Termination of Research Program by SERONO.

SERONO may in its absolute discretion terminate the Research Program and this Agreement prior to the end of the Program's full term, effective either
(i) at the end of the second Research Year, or (ii) at the end of the fourth Research Year, in either case upon not less than ninety (90) days prior written notice to VERTEX (the "Early Termination Notice Period"). SERONO will make all of the payments required to be made hereunder which accrue or fall due during the Early Termination Notice Period and prior to the effective date of any such early termination.

8.5. No Termination upon Bankruptcy.

8.5.1. VERTEX Bankruptcy. All rights and licenses granted under or pursuant to this Agreement by VERTEX to SERONO are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code, as amended from time to time (the "Bankruptcy Code"), licenses or rights to "intellectual property" as defined under Section 101(35A) of the Bankruptcy Code. The parties agree that SERONO, as a recipient of such rights and licenses under this Agreement, shall retain and may fully exercise those rights and licenses notwithstanding a filing by or against VERTEX under the Bankruptcy Code, to the full extent provided under the Bankruptcy Code.

8.5.2. SERONO Bankruptcy. All rights and licenses granted under or pursuant to this Agreement by SERONO to VERTEX are, and shall otherwise be deemed to be, under any statutes or regulations that may govern SERONO's bankruptcy under Swiss law, licenses or rights to "intellectual property." The parties agree that VERTEX, as recipient of such rights and licenses under this Agreement, shall retain and may fully exercise those rights and licenses

notwithstanding a filing by or against SERONO under such bankruptcy statutes or regulations, to the full extent provided under such statutes or regulations.

8.6. Effect of Termination.

Except where explicitly provided elsewhere herein, termination of this Agreement for any reason, or expiration of this Agreement, will not affect:
(i) obligations which have accrued as of the date of termination or expiration, and (ii) obligations and rights which are expressly intended to survive termination or expiration of this Agreement, including rights and obligations under the licenses granted by SERONO under Section 3.5 hereof, rights and obligations pursuant to Sections 7.2 and 7.3 and Articles IV, VI, X and XI hereof, to the extent applicable, and the rights and obligations of both parties under any License Agreement in effect on the effective date of termination of this Agreement. Any right to terminate this Agreement shall be in addition to and not in lieu of all other rights or remedies that the party giving notice of termination may have at law or in equity or otherwise, including without limitation rights under the United States Bankruptcy Code.

ARTICLE IX -- REPRESENTATIONS AND WARRANTIES

9.1. Representations and Warranties of VERTEX.

VERTEX represents and warrants to SERONO as follows:

(i) Authorization. This Agreement has been duly executed and delivered by VERTEX and constitutes the valid and binding obligation of VERTEX, enforceable against VERTEX in accordance with its terms except as enforceability may be limited by bankruptcy, fraudulent conveyance, insolvency, reorganization, moratorium and other laws relating to or affecting creditors' rights generally and by general equitable principles. The execution, delivery and performance of this Agreement have been duly authorized by all necessary action on the part of VERTEX, its officers and directors. The execution, delivery and performance of this Agreement does not breach, violate, contravene or constitute a default under any contracts, arrangements or commitments to which VERTEX is a party or by which it is bound nor does the execution, delivery and performance of this Agreement by VERTEX violate any order, law or regulation of any court, governmental body or administrative or other agency having authority over it.

(ii) No Third Party Rights. VERTEX owns or possesses adequate licenses or other rights to use all VERTEX Program Technology and to grant the licenses and rights herein.

The granting of the Development Election to SERONO hereunder does not violate any right known to VERTEX of any Third Party.

(iii) Third Party Patents. Except as disclosed in writing between the parties to this Agreement or their respective agents, VERTEX is not aware of any issued patents or pending patent applications that, if issued, would be infringed by the development, manufacture, use, import, offer to sell or sale of any Compound, Drug Product Candidate, Bulk Drug Substance or Drug Product pursuant to this Agreement or a License Agreement.

(vi) Disclosure. To the best of VERTEX's knowledge, all material information regarding the VERTEX Program Technology disclosed by VERTEX to SERONO in writing prior to the Effective Date was accurate and complete in all material respects when disclosed.

9.2. Representations and Warranties of SERONO.

SERONO represents and warrants to VERTEX as follows:

(i) Authorization. This Agreement has been duly executed and delivered by SERONO and constitutes the valid and binding obligation of SERONO, enforceable against SERONO in accordance with its terms except as enforceability may be limited by bankruptcy, fraudulent conveyance, insolvency, reorganization, moratorium and other laws relating to or affecting creditors' rights generally and by general equitable principles. The execution, delivery and performance of this Agreement have been duly authorized by all necessary action on the part of SERONO, its officers and directors. The execution, delivery and performance of this Agreement does not breach, violate, contravene or constitute a default under any contracts, arrangements or commitments to which SERONO is a party or by which it is bound nor does the execution, delivery and performance of this Agreement by SERONO violate any order, law or regulation of any court, governmental body or administrative or other agency having authority over it.

(ii) Third Party Rights. SERONO owns or possesses adequate licenses or other rights to use all SERONO Program Technology in accordance with the provisions of this Agreement.

(iii) Third Party Patents. Except as disclosed in writing between the parties to this Agreement or their respective agents, SERONO is not aware of any issued patents or pending patent applications that, if issued, would be infringed by the development, manufacture, use, import, offer to sell or sale of any Compound, Drug Product Candidate, Bulk Drug Substance or Drug Product pursuant to this Agreement or a License Agreement.

ARTICLE X -- DISPUTE RESOLUTION

10.1. Governing Law.

This Agreement shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts and of the United States of America, without giving effect to the doctrine of conflict of laws.

10.2. Dispute Resolution Process.

Except as otherwise explicitly provided herein, in the event of any controversy or claim arising out of or relating to any provision of this Agreement, or the collaborative effort contemplated hereby, the parties shall, and either party may, initially refer such dispute to the JRC, and failing resolution of the controversy or claim within thirty (30) days after such referral, the matter shall be referred to the Chief Executive Officer of VERTEX and the Chief Executive Officer of SERONO, or other members of senior management of such parties who report directly to their respective Chief Executive Officers and who are not otherwise directly involved in the controversy or claim at issue, each with full authority from the Chief Executive Officer to settle the dispute, who shall, as soon as practicable, attempt in good faith to resolve the controversy or claim. If such controversy or claim is not resolved within sixty (60) days of the date of initial referral of the dispute to the JRC, either party shall be free to initiate proceedings based on such controversy or claim in any court having requisite jurisdiction.

ARTICLE XI -- MISCELLANEOUS PROVISIONS

11.1. Official Language.

English shall be the official language of this Agreement, and all communications between the parties hereto shall be conducted in that language.

11.2. Waiver.

No provision of this Agreement may be waived except in writing by both parties hereto. No failure or delay by either party hereto in exercising any right or remedy hereunder or under applicable law will operate as a waiver thereof, or a waiver of that or any other right or remedy on any subsequent occasion.

11.3. Force Majeure.

Neither party will be in breach hereof by reason of its delay in the performance of or failure to perform any of its obligations hereunder, if that delay or failure is caused by strikes, acts of God or the public enemy, riots, incendiaries, interference by civil or military authorities, or

any similar cause beyond its control and without its fault or negligence; provided, however, the party claiming force majeure shall promptly notify the other party of the existence of such force majeure, shall use its best efforts to avoid or remedy such force majeure and shall continue performance hereunder with the utmost dispatch whenever such force majeure is avoided or remedied. Notwithstanding the foregoing, in the event that VERTEX provides notice of force majeure to SERONO, SERONO shall have the right not to make any future payments otherwise payable hereunder until such time as VERTEX resumes performance hereunder, and the schedule for payments hereunder shall be revised to apply any payments already made in advance by SERONO for the performance so delayed or suspended by VERTEX hereunder to such performance once it is resumed or to refund any such payments to SERONO in the event that such performance is not for any reason resumed.

11.4. Severability.

Should one or more provisions of this Agreement be or become invalid, then the parties hereto shall attempt to agree upon valid provisions in substitution for the invalid provisions, which in their economic effect come so close to the invalid provisions that it can be reasonably assumed that the parties would have accepted this Agreement with those new provisions. If the parties are unable to agree on such valid provisions, the invalidity of such one or more provisions of this Agreement shall nevertheless not affect the validity of the Agreement as a whole, unless the invalid provisions are of such essential importance to this Agreement that it may be reasonably presumed that the parties would not have entered into this Agreement without the invalid provisions.

11.5. Government Acts.

In the event that any act, regulation, directive, or law of a country or its government, including its departments, agencies or courts, should make impossible or prohibit, restrain, modify or limit any material act or obligation of SERONO or VERTEX under this Agreement, the party, if any, not so affected, shall have the right, at its option, to suspend or terminate this Agreement as to such country, if good faith negotiations between the parties to make such modifications therein as may be necessary to fairly address the impact thereof are not successful after a reasonable period of time in producing mutually acceptable modifications to this Agreement.

11.6. Government Approvals.

Each party will obtain any government approval required in its country of domicile, or under any treaties or international agreements to which its country of domicile is a signatory, to enable this Agreement to become effective, or to enable any payment hereunder to be made, or any other obligation hereunder to be observed or performed. Each party will keep the other informed of progress in obtaining any such government approval, and will cooperate with the other party in any such efforts.

11.7. Export Controls.

This Agreement is made subject to any restrictions concerning the export of materials and technology from the United States which may be imposed upon either party to this Agreement from time to time by the United States Government. In the event any such restrictions are imposed after the Effective Date and thereby render any provisions of this Agreement invalid or unenforceable, the provisions of Section 11.4 of this Agreement shall be applicable to those provisions. SERONO will not export, directly or indirectly, any VERTEX Program Technology to any countries for which the United States Government or any agency thereof at the time of such export requires an export license or other governmental approval without first obtaining the written consent to do so from the Department of Commerce or other applicable agency of the United States Government in accordance with the applicable statute or regulation.

11.8. Assignment; Successors and Assigns.

This Agreement may not be assigned or otherwise transferred by either party without the prior written consent of the other party; provided, however, that either party may assign this Agreement, without the consent of the other party, (i) to any of its Affiliates, if the assigning party guarantees the full performance of its Affiliates' obligations hereunder, or (ii) in connection with the transfer or sale of all or substantially all of its assets or business or in the event of its merger or consolidation with another company. Any purported assignment in contravention of this Section 11.8 shall, at the option of the nonassigning party, be null and void and of no effect. No assignment shall release either party from responsibility for the performance of any of its accrued obligations hereunder. This Agreement shall be binding upon and enforceable against the successor to or any permitted assignees of either of the parties hereto.

11.9. Affiliates.

Each party may perform its obligations hereunder personally or through one or more Affiliates, although each party shall nonetheless be solely responsible for the performance of its Affiliates. Neither party shall permit any of its Affiliates to commit any act (including any omission) which such party is prohibited hereunder from committing directly.

11.10. Counterparts.

This Agreement may be signed in any number of counterparts with the same effect as if the signatures to each counterpart were upon a single instrument, and all such counterparts together shall constitute the same agreement.

11.11. No Agency.

Nothing herein contained shall be deemed to create an agency, joint venture, amalgamation, partnership or similar relationship between SERONO and VERTEX. Notwithstanding any of the provisions of this Agreement, neither party to this Agreement shall at any time enter into, incur, or hold itself out to third parties as having authority to enter into or incur, on behalf of the other party, any commitment, expense, or liability whatsoever, and all contracts, expenses and liabilities in connection with or relating to the obligations of each party under this Agreement shall be made, paid, incurred and undertaken exclusively by such party on its own behalf and not as an agent or representative of the other.

11.12. Notice.

All communications between the parties with respect to any of the provisions of this Agreement will be sent to the addresses set out below, or to such other addresses as may be designated by one party to the other by notice pursuant hereto, by air courier (which shall be deemed received by the other party on the third (3rd) business day following deposit with the air courier), or by facsimile transmission, or other electronic means of communication (which shall be deemed received when transmitted), with confirmation by air courier, sent by the close of business on or before the next following business day:

if to SERONO, at:

Laboratoires Serono S.A.
Zone Industrielle de l'Ouriettaz

1170 Aubonne
Switzerland
Fax: 41-22-354-5020
Attention: General Manager

with a copy to:

Serono International S.A.
15 bis Chemin des Mines

1202 Geneva
Switzerland
Fax: 41-22-739-3070
Attention: General Counsel

if to VERTEX, at:

Vertex Pharmaceuticals Incorporated
130 Waverly Street
Cambridge, MA U.S.A. 02139-4211

Fax: (617) 577-6680
Attention: Joshua S. Boger, Chief Executive Officer

with a copy to:

Kirkpatrick & Lockhart LLP 75 State Street
Boston, MA U.S.A. 02109
Fax: (617) 951-9151
Attention: Kenneth S. Boger, Esq.

11.13. Headings.

The section and paragraph headings are for convenience of reference only and will not be deemed to affect in any way the language of the provisions to which they refer.

11.14. Entire Agreement.

This Agreement, including the schedules appended hereto, contains the entire understanding of the parties relating to the matters referred to herein, and may only be amended by a written document referencing this Agreement, duly executed on behalf of the respective parties.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed and delivered by their duly authorized representatives as of the day and year first above written.

VERTEX PHARMACEUTICALS INCORPORATED

By: /s/ Joshua S. Boger

---------- Joshua S. Boger
Title: Chief Executive Officer

LABORATOIRES SERONO S.A.

By: /s/ Ernesto Bertarelli

Title: Ernesto Bertarelli

Authorized Representative

SCHEDULE 1.4

[**********]

[**********].

Research Agreement -- Confidential
SCHEDULE 2.4

[**********]

[**********]

[**********]

[**********]
[**********]

[**********]
[**********]

[**********]
[**********]

[**********]
[**********]

[**********]
[**********]

[**********]
[**********]

[**********]

[**********]

[**********][**********]
[**********][**********]
[**********][**********]
[**********][**********]
[**********][**********]
[**********][**********]
[**********]

Research Agreement -- Confidential

[**********]:
[**********][*******]
[**********][********]
[**********][*********]
[**********][*********]
[**********][**********]
[**********]

Research Agreement -- Confidential
SCHEDULE 1.10

Countries of the Far East

Brunei

Burma (Myanmar)

Cambodia (Kampuchea)

Indonesia

Japan

Laos

Malaysia

Mongolia

Philippines

Singapore

Thailand

Vietnam

Korea (South and North)

Taiwan

People's Republic of China

Research Agreement -- Confidential
SCHEDULE 3.2

Minimum Development Criteria

With respect to each Proposed Candidate, at least the following information and materials shall be available, and processes established, at the time of the Selection Notice:

[**********]

[**********]
[**********]
[**********]
[**********]
[**********]
[**********]
[**********]

Research Agreement -- Confidential
EXHIBIT A

License, Development and Commercialization Agreement

Research Agreement -- Confidential
EXHIBIT A

License, Development and Commercialization Agreement

between

Vertex Pharmaceuticals Incorporated

and

Laboratoires Serono S.A.
License, Development and Commercialization Agreement

Table of Contents

Table of Contents (continued)

Table of Contents (continued)

LICENSE, DEVELOPMENT AND COMMERCIALIZATION AGREEMENT

THIS LICENSE, DEVELOPMENT AND COMMERCIALIZATION AGREEMENT (the "Agreement") is made and entered into as of _____, _____ between VERTEX PHARMACEUTICALS INCORPORATED (hereinafter "VERTEX"), a Massachusetts corporation with principal offices at 130 Waverly Street, Cambridge, MA 02139-4242, and LABORATOIRES SERONO S.A. (hereinafter "SERONO"), a Swiss corporation with principal offices at Zone Industrielle de l'Ouriettaz, 1170 Aubonne, Switzerland.

INTRODUCTION

WHEREAS, VERTEX and SERONO are parties to a certain Research Agreement dated December 11, 2000 (the "Research Agreement") under which VERTEX and SERONO are attempting to design novel, small-molecule compounds targeting certain Caspases (as defined below); and

WHEREAS, SERONO may elect under the terms set forth in the Research Agreement to develop and commercialize one or more Compounds (as defined below) identified during the Research Program thereunder, in accordance with the terms and conditions set forth in this Agreement; and

WHEREAS, in accordance with the Research Agreement SERONO has elected to develop and commercialize the Drug Product Candidate (as defined below), and the parties therefore wish to execute this Agreement, which is identical in substance to the agreement attached as Exhibit A to the Research Agreement, to memorialize the provisions specific to development and commercialization of such Drug Product Candidate and Drug Product (as defined below); and

NOW THEREFORE, in consideration of the foregoing premises, the mutual covenants set forth herein, and other good and valuable consideration, the parties agree as follows:

ARTICLE I -- DEFINITIONS

1.1 "Affiliate" shall mean, with respect to any Person, any other Person which directly or indirectly controls, is controlled by, or is under direct or indirect common control with, such Person. The term "control" means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by

contract or otherwise. Control will be presumed if one Person owns, either of record or beneficially, more than forty percent (40%) of the voting stock of any other Person.

1.2 "Bulk Drug Substance" shall mean the Drug Product Candidate in bulk crystal, powder, solution or other form suitable for incorporation in the Drug Product, which if required in order to stabilize the Drug Product Candidate shall be formulated with stabilizing excipients.

1.3 "Caspases" shall mean cysteine-proteases that cleave target proteins preferentially after an aspartic-acid residue.

1.4 "Compound" shall mean [**********
****
****
****
****
**********.

1.5 "Controlled" shall mean the legal authority or right of a party hereto to grant a license or sublicense of intellectual property rights to another party hereto, or to otherwise disclose proprietary or trade secret information to such other party, without breaching the terms of any agreement with a Third Party, misappropriating the proprietary or trade secret information of a Third Party or incurring any financial obligation or potential financial obligation to a Third Party.

1.6 "Core Development Activities" shall mean all activities regardless of where they are performed which are part of a Development Program for the Drug Product Candidate and which the JDC believes are reasonably necessary in order to obtain Regulatory Approval from the FDA and the EMEA or its comparable successor for marketing the corresponding Drug Product in the United States and the European Union for the Indications selected.

1.7 "Core Development Costs" shall mean the total of all costs incurred by a party hereto in the conduct of Core Development Activities under the Core Development Plan for the Drug Product Candidate, including but not limited to all direct and indirect costs associated with preclinical studies, clinical trials, manufacturing of drug substance and drug product, scale-up and formulation research and regulatory activities, but excluding any allocation of corporate overheads, determined in a manner not at variance with applicable Generally Accepted

Accounting Principles (GAAP), International Accounting Standards (IAS) and the party's usual practices.

1.8 "Development Plan" and "Core Development Plan" shall have the meanings set forth in Section 3.3.1 hereof.

1.9 "Development Program" shall mean activities associated with development of the Drug Product Candidate for sale as a Drug Product, including but not limited to (a) preparation for preclinical assessment of the Drug Product Candidate; (b) formulation and manufacture of the Drug Product Candidate for use in preclinical studies; (c) preclinical animal studies performed in preparation for the filing of an IND; (d) manufacture and formulation of the Drug Product Candidate for clinical trials; (e) planning, implementation, evaluation, monitoring and management of human clinical trials; (f) manufacturing process development and scale-up for the commercial manufacture of Bulk Drug Substance and Drug Product; (g) preparation and submission of applications for Regulatory Approval; and (h) post-market surveillance of Indications, as required or agreed as part of Regulatory Approval by any governmental regulatory authority.

1.10 "Drug Product" shall mean a finished dosage form which is prepared from Bulk Drug Substance and is ready for administration to the ultimate consumer as a pharmaceutical.

1.11 "Drug Product Candidate" shall mean a Compound identified on Schedule
1.11 hereof as to which SERONO has exercised the Development Election under the Research Agreement and which has become a subject of this Agreement in accordance with the provisions thereof.

1.12 "Effective Date" shall mean the effective date of this Agreement as set forth on the first page hereof.

1.13 "EMEA" shall mean the European Agency for the Evaluation of Medicinal Products.

1.14 "European Union" shall mean those countries which are now or later become members of the European Union.

1.15 "Exclusive Territory" shall mean all countries of the Territory other than the countries of North America.

1.16 "Far East" shall mean all countries set forth on Schedule 1.16 hereof.

1.17 "First Commercial Sale" shall mean the first sale of the Drug Product by SERONO or an Affiliate or sublicensee of SERONO in a country in the Territory following Regulatory Approval of the Drug Product in that country, or if no such Regulatory Approval or similar marketing approval is required, the date upon which the Drug Product is first sold in such

country by SERONO or an Affiliate or sublicensee of SERONO pursuant to a plan of commercial launch.

1.18 "FDA" shall mean the United States Food and Drug Administration.

1.19 "ICE" shall mean [**********]

1.20 "Indication" shall mean a generally acknowledged disease or condition, a significant manifestation of a disease or condition, or symptom associated with a disease or syndrome for which use of the Drug Product is indicated, as would be identified in the Drug Product's label under applicable FDA regulations or the foreign equivalent thereof.

1.21 "IND" shall mean the investigational new drug application relating to the Drug Product Candidate filed with the FDA pursuant to 21 C.F.R. Part 312, including any amendments thereto. References herein to IND shall include, to the extent applicable, any comparable filing(s) made with a Regulatory Authority in other countries in the Territory (such as a clinical trial exemption (CTX) in the European Union).

1.22 "JDC" shall have the meaning set forth in Section 3.2 hereof.

1.23 "JMC" shall have the meaning set forth in Section 5.2 hereof.

1.24 "Joint Know-How" shall have the meaning set forth in Section 8.1 hereof.

1.25 "Joint Patents" shall have the meaning set forth in Section 8.1 hereof.

1.26 "Know-How" shall mean all data, technical information, know-how, inventions, discoveries, trade secrets, processes, techniques, materials, compositions, methods, formulas or improvements, whether (i) invented, discovered or developed by either party hereto or its Affiliates under a Development Program hereunder, (ii) invented, discovered or developed by VERTEX or its Affiliates under the Research Program under the Research Agreement, (iii) invented, discovered or developed by VERTEX prior to the Effective Date of the Research Agreement in the course of a research program directed toward the discovery of Caspase inhibitors, (iv) otherwise invented, discovered or developed, and Controlled, by VERTEX or its Affiliates; or (v) Controlled by VERTEX or its Affiliates pursuant to a license or other grant of right, title or interest from its Far East collaborator, SERONO or a Third Party, and whether or not patentable or confidential, that relate to the development, manufacture, use, sale, offer for sale or import of any Bulk Drug Substance, Drug Product Candidate or Drug Product, or a formulation or prodrug thereof; provided however, that the term "Know-How" shall not apply to VERTEX's general drug design technology, whether in software or hardware, tangible or intangible, form.

1.27 "Manufacturing Cost" shall mean [**********].

1.28 "Net Sales" with respect to the Drug Product shall mean [**********
****
**********]

(a) [**********
**********]

(b) [**********
**********];

(c) [**********

**********]

[**********
****
**********]

1.29 "North America" shall mean the United States and Canada.

1.30 "North American Joint Venture" shall have the meaning set forth in Section 5.2.

1.31 "Patents" shall mean all existing patents and patent applications and all patent applications hereafter filed, including any continuation, continuation-in-part, division, provisional or any substitute applications, any patent issued with respect to any such patent applications, any reissue, reexamination, renewal or extension (including any supplementary protection certificate) of any such patent, and any confirmation patent or registration patent or patent of addition based on any such patent, and all foreign counterparts of any of the foregoing.

1.32 "Person" shall mean any individual, corporation, partnership, association. joint-stock company, trust, unincorporated organization or government or political subdivision thereof.

1.33 "Phase I Clinical Trial" shall mean an initial human clinical trial conducted for inclusion in (i) that portion of the FDA submission and approval process which provides for the initial trial of the Drug Product Candidate in a small number of subjects, to establish the safety profile of the Drug Product Candidate and to collect initial data on its pharmacokinetics and pharmacological effects, as more fully defined in 21 C.F.R. ss. 312.21(a), and
(ii) equivalent submissions with similar requirements in other countries in the Territory.

1.34 "Phase II Clinical Trial" shall mean shall mean a human clinical trial conducted for inclusion in (i) that portion of the FDA submission and approval process which provides for trials of the Drug Product Candidate on a limited number of patients for the purposes of collecting data on dosages, evaluating safety and collecting preliminary information regarding efficacy in

the proposed therapeutic Indication, as more fully defined in 21 C.F.R. ss.312.21(b), and (ii) equivalent submissions with similar requirements in other countries in the Territory.

1.35 "Phase III Clinical Trial" shall mean a human clinical trial conducted for inclusion in (i) that portion of the FDA submission and approval process which provides for the continued trials of the Drug Product Candidate on sufficient numbers of patients to generate safety and efficacy data to support Regulatory Approval in the proposed therapeutic Indication, as more fully defined in 21 C.F.R. ss. 312.21(c), and (ii) equivalent submissions with similar requirements in other countries in the Territory

1.36 "Regulatory Approval" shall mean, with respect to any country, all authorizations by the appropriate governmental entity or entities necessary for commercial sale of the Drug Product in that country including, without limitation and where applicable, approval of labeling, price, reimbursement and manufacturing. "Regulatory Approval" in the United States shall mean final approval of a new drug application pursuant to 21 C.F.R. ss. 314 (or any successor regulation having the same purpose or effect), permitting marketing of the Drug Product in interstate commerce in the United States. "Regulatory Approval" in the European Union shall mean final approval of a Marketing Authorization Application pursuant to Council Directive 75/319/EEC, as amended, or Council Regulation 2309/93/EEC, as amended, or pursuant to any successor regulation having the same purpose or effect.

1.37 "Research Agreement" shall mean that certain Research Agreement between VERTEX and SERONO dated December 11, 2000.

1.38 "Second Opportunity" shall mean the second opportunity for SERONO to exercise its Development Election with respect to a Refused Candidate as set forth in Section 3.3 of the Research Agreement.

1.39 "SERONO Know-How" shall mean all Know-How Controlled by SERONO or any of its Affiliate.

1.40 "SERONO Patents" shall mean all Patents Controlled by SERONO or any of its Affiliates claiming Bulk Drug Substance, the Drug Product Candidate or the Drug Product, or a formulation or prodrug thereof, or a method of making or using Bulk Drug Substance, the Drug Product Candidate or the Drug Product, or a formulation or prodrug thereof, or an improvement to the subject matter of a Patent covering any of the foregoing, that is invented under the Development Program hereunder. A list of SERONO Patents is appended hereto as Schedule 1.40 and will be updated periodically to reflect additions thereto during the term of this

Agreement.

1.41 "SERONO Technology" shall mean all SERONO Patents, all SERONO Know-How and SERONO's and its Affiliates' right, title and interest in Joint Patents and Joint Know-How which is applied by SERONO to the development, manufacture or use of Bulk Drug Substance, the Drug Product Candidate or the Drug Product.

1.42 "Technology" shall mean VERTEX Technology and SERONO Technology.

1.43 "Territory" shall mean all countries of the world except for the countries of the Far East identified as such on Schedule 1.16 hereto.

1.44 "Third Party" shall mean any person or entity which is not a party or an Affiliate of any party to this Agreement.

1.45 "Valid Patent Claim" shall mean either a claim of an issued and unexpired Patent which has not lapsed, been revoked or abandoned or held permanently unenforceable or invalid by a decision of a court or other governmental agency of competent jurisdiction, unappealable or unappealed within the time allowed for appeal, and which has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue, reexamination, disclaimer or otherwise.

1.46 "VERTEX Know-How" shall mean all Know-How Controlled by VERTEX or any of its Affiliates.

1.47 "VERTEX Patents" shall mean all Patents Controlled by VERTEX or any of its Affiliates claiming Bulk Drug Substance, the Drug Product Candidate or the Drug Product, or a formulation or prodrug thereof, or a method of making or using Bulk Drug Substance, the Drug Product Candidate or the Drug Product, or a formulation or prodrug thereof, or an improvement to the subject matter of a Patent covering any of the foregoing, that is (i) invented by VERTEX or its Affiliates prior to the Effective Date of the Research Agreement, (ii) invented under the Research Program under the Research Agreement or under a Development Program hereunder, (iii) otherwise invented and Controlled by VERTEX or its Affiliates, or (iv) Controlled by VERTEX or its Affiliates pursuant to a license or other grant of right, title or interest from its Far East collaborator, SERONO or a Third Party. A list of VERTEX Patents is appended hereto as Schedule
1.47 and will be updated periodically to reflect additions thereto during the term of this Agreement.

1.48 "VERTEX Technology" shall mean all VERTEX Patents, all VERTEX Know-How and VERTEX's and its Affiliates' right, title and interest in Joint Patents and Joint Know-How.

ARTICLE II -- LICENSE

2.1 Grant to SERONO.

2.1.1 License. Subject to the other provisions of this Agreement, VERTEX hereby grants to SERONO a license (or sublicense, as appropriate) in the Territory under the VERTEX Technology, exclusive in the Exclusive Territory, and co-exclusive in North America with VERTEX and/or the North American Joint Venture, with the right to sublicense (after prior consultation with VERTEX), to exercise its rights and fulfill its obligations under this Agreement and to research, develop, manufacture, have manufactured, use, sell, offer to sell and import Bulk Drug Substance (subject to VERTEX's exclusive manufacturing rights under Article IV and Section 6.2 hereof), Drug Product Candidates and Drug Products. Subject to the provisions of this Agreement, VERTEX shall have the right to use VERTEX Technology to fulfill its obligations and exercise its rights under this Agreement, including but not limited to its exclusive rights to manufacture and supply Bulk Drug Substance under Article IV and Section 6.2 hereof, its rights under Section 3.6 hereof, and any rights and obligations with respect to the North American Joint Venture. VERTEX retains all rights to VERTEX Technology except to the extent explicitly granted to SERONO hereunder.

2.1.2 Sublicensees and Subcontractors. SERONO shall guarantee and be responsible to VERTEX for the performance of any of its sublicensees or subcontractors under any sublicense or other agreement with respect to the rights granted to SERONO by VERTEX and the obligations assumed by SERONO hereunder. SERONO shall not permit any subcontractors or sublicensees to use VERTEX Technology without provisions safeguarding confidentiality equivalent to those provided in this Agreement. Any such provisions will allow VERTEX the right to directly enforce the obligations of confidentiality with respect to VERTEX Technology in the possession of the subcontractor or sublicensee.

2.2 Grant to VERTEX.

2.2.1 License. Subject to the other provisions of this Agreement, SERONO hereby grants to VERTEX (i) a royalty-free non-exclusive, worldwide license (or sublicense, as appropriate) under the SERONO Technology, with the right to sublicense, to exercise its rights and fulfill its obligations under this Agreement and to meet its obligations to its collaborator in the Far East with respect to the manufacture, development and sale of Bulk Drug Substance, Drug Product Candidates and Drug Product in the Far East, and (ii) to the extent not inconsistent with SERONO's exclusive rights in the Exclusive Territory and co-exclusive rights in North America, to research, develop, manufacture, have manufactured, use, sell, offer to sell and import Bulk Drug Substance, Drug Product Candidates and Drug Products, a royalty-free non-exclusive, worldwide license (or sublicense, as appropriate), with the right to sublicense, to practice and

use the SERONO Technology. SERONO retains all rights to SERONO Technology except to the extent explicitly granted to VERTEX hereunder.

2.2.2 Sublicensees and Subcontractors. VERTEX shall guarantee and be responsible to SERONO for the performance of any of its sublicensees or subcontractors under any sublicense or other agreement with respect to the rights granted to VERTEX by SERONO and the obligations assumed by VERTEX hereunder. VERTEX shall not permit any subcontractors or sublicensees to use SERONO Technology without provisions safeguarding confidentiality equivalent to those provided in this Agreement. Any such provisions will allow SERONO the right to directly enforce the obligations of confidentiality with respect to SERONO Technology in the possession of the subcontractor or sublicensee.

2.3 Information Sharing.

2.3.1 Between Parties. Each party shall deliver to the other all Know-How Controlled by it or its Affiliates and requested by the other party from time to time, pursuant to the exercise by such other party of the licenses granted hereunder. The Know-How shall be delivered in a form as shall reasonably facilitate the use of such Know-How and shall include copies of all Patents and all other manifestations of the intellectual property embodied in the Bulk Drug Substance, Drug Product Candidate or Drug Product, or formulation or prodrug thereof, whether in human or machine readable form.

2.3.2 With VERTEX's Far East Collaborator. VERTEX's agreement with its Far East collaborator for development and sale of drug product candidates and drug products in the Far East obligates each party to share with the other party information which is relevant to the development of such drug product candidates and drug products. That information includes raw data from development and clinical trials of Compounds in the Far East and in the rest of the world, information relating to manufacture of drug product candidates and drug products and copies of material written communications between VERTEX and its licensees (including its Far East collaborator), on the one hand, and regulatory authorities, on the other, in the Far East and in the rest of the world relating to such drug product candidates and drug products. The agreement also provides that VERTEX and its licensees outside the Far East will have the right to cross reference, in their regulatory filings made outside the Far East covering Drug Product Candidates or Drug Products, all regulatory filings, and information contained therein, made in the Far East relative to such Drug Product Candidates or Drug Products developed there by VERTEX's Far East collaborator; provided that a reciprocal right is made available to VERTEX's Far East collaborator, in connection with comparable regulatory filings in the Far East, by VERTEX and its licensees outside the Far East. VERTEX will share with SERONO information received by it from its Far East collaborator pursuant to the foregoing, and will provide SERONO

with a right to cross-reference in its regulatory filings made in the Territory regulatory filings made by VERTEX's Far East collaborator in the Far East relative to the Drug Product Candidate or Drug Product, as provided above, in consideration of the reciprocal right hereby granted to VERTEX by SERONO pursuant to the foregoing to share information received by it from SERONO with VERTEX's Far East collaborator and to permit VERTEX and its Far East collaborator to cross-reference regulatory filings made by SERONO in the Territory relative to the Drug Product Candidate or Drug Product in regulatory filings made by VERTEX or its collaborator in the Far East relative to the Drug Product Candidate or Drug Product.

ARTICLE III -- DEVELOPMENT

3.1 Commencement of Development Program.

SERONO and VERTEX shall promptly and diligently commence and pursue a Development Program with respect to the Drug Product Candidate as soon as practicable after exercise by SERONO of its Development Election, as set forth in the Research Agreement, with respect to that Drug Product Candidate.

3.2 Joint Development Committee.

3.2.1 Formation and Responsibilities. Within thirty (30) days of the Effective Date, VERTEX and SERONO will establish a Joint Development Committee (the "JDC") made up of equal numbers of VERTEX and SERONO personnel to be designated from time to time by each party. Each of VERTEX and SERONO shall have one vote on the JDC. The JDC will be responsible for the preparation and overall implementation of the Development Program with respect to the Drug Product Candidate, and may act directly or through such sub-committees as it may deem appropriate to establish. Meetings of the JDC other than regularly scheduled quarterly meetings may be held only if a quorum of at least two (2) representatives of each party participates; except that lack of a quorum shall not prevent the scheduling and conduct of a meeting by either party after that party has made good faith but unsuccessful attempts for more than ninety (90) days to schedule and convene the meeting. The JDC shall meet formally at least quarterly, or with such other frequency, and at such time and location, as may be established by the JDC, for the following purposes, among others:

(i) To review and, if necessary, revise the Development Plan as set forth in Section 3.3 below, and to oversee and coordinate the parties' development activities and the associated development budget;

(ii) To assign operational responsibility to VERTEX or SERONO for the conduct of particular activities specified in the Development Plan;

License, Development and Commercialization Agreement -- Confidential -- Page 10 (iii) To receive and review reports by VERTEX and SERONO, which shall be prepared by each party and submitted to the other party and to the JDC on a quarterly basis within thirty (30) days after the end of the quarter, setting forth in reasonable detail, with supporting data, the results of work performed during the preceding quarter under the Development Plan by the party submitting the report;

(iv) To assist in coordinating scientific interactions and resolving disagreements between VERTEX and SERONO during the course of the Development Program; and

(v) To discuss matters relating to Patents claiming Bulk Drug Substance, the Drug Product Candidate or Drug Product, or methods of using or making the same, including but not limited to issues of inventorship and decisions relating to the filing, prosecution and maintenance of those Patents.

SERONO will prepare the initial draft of an agenda for each JDC meeting and will submit the draft to VERTEX for comments a reasonable period before the scheduled meeting date. The party hosting a particular JDC meeting shall prepare and deliver to the members of the JDC, within thirty (30) days after the date of each meeting, minutes of such meeting setting forth, among other things, all decisions of the JDC, and including a summary of the status of development activities as reported to the JDC. The party not preparing the minutes may suggest changes or amendments to the minutes, and may provide a supplement addressing activities at the meeting which are not reported in the minutes, which shall be distributed to the parties and filed with the meeting minutes. In case the JDC meets by means of telephone or video conferences, the responsibility for preparing minutes shall lie with VERTEX.

3.2.2 Retention of Rights. Notwithstanding the foregoing, each party shall retain the rights, powers, and discretion expressly granted to it under this Agreement, and the JDC shall not be delegated or vested with any such rights, powers or discretion except as expressly provided in this Agreement. The JDC shall not have the power to amend or modify this Agreement, which may only be amended or modified as provided in Section 15.14 hereof.

3.2.3 Decision Making. The objective of the JDC shall be to reach agreement by consensus on all matters falling within its authority hereunder within the scope of the Development Plan. However, if the JDC cannot reach consensus on a particular matter, [**********
****
****
****

License, Development and Commercialization Agreement -- Confidential -- Page 11
****
**********].

3.3 Development Plan.

3.3.1 General. The JDC shall oversee the implementation of the development plan (the "Development Plan") for the Drug Product Candidate which shall be completed by the JDC within ninety (90) days after the exercise by SERONO of its Development Election, as set forth in the Research Agreement, with respect to the Drug Product Candidate, and which shall describe fully the proposed preclinical studies, toxicology, clinical trials, regulatory plans, clinical trial and commercial material requirements and any other key

elements of obtaining Regulatory Approval in each country where the Drug Product is to be marketed. The Development Plan will include, among other things, a plan (the "Core Development Plan") for the conduct of Core Development Activities, and will provide for the allocation of development tasks between VERTEX and SERONO. Each party assigned a development task will, in a timely fashion, prepare a detailed plan for the accomplishment of that task, including a schedule therefor, and will submit that plan to the JDC for its review. Development tasks shall be advanced in parallel rather than serially where practicable and appropriate, if doing so would be likely to advance the ultimate date of product approval and launch and is otherwise commercially reasonable.

3.3.2 Process Development. VERTEX will be responsible for the development of processes for manufacture of Bulk Drug Substance, and for the preparation and implementation of a plan to accomplish that task. SERONO will be responsible for the development of processes for formulation and manufacture of the Drug Product from Bulk Drug Substance, and for the preparation and implementation of a plan to accomplish that task. Each party will work with the JDC to coordinate its plans with those of the other party, with the objective of ensuring operationally effective and timely integration of the two plans, as necessary to meet the overall schedule for process development and the supply of Bulk Drug Substance and Drug Product as set forth in the Development Plan.

3.4 Development Costs.

3.4.1 Apportionment. [**********
****
****
**********].

 3.4.2 Audit. Each party shall keep or cause to be kept accurate records in sufficient detail to enable Core Development Costs to be determined. Each party, upon the written request and at the expense of the other party, and in any event not more frequently than once in any calendar year, shall permit an independent public accountant of national prominence selected by the other party, and approved by the first party (with approval not to be unreasonably withheld), to have access during normal business hours to those records of such party as may be reasonably necessary to verify the accuracy of the cost reports submitted by such party pursuant to this Section 3.4 in respect of any calendar year ending not more than three (3) years prior to the date of the aforementioned written request. The parties shall mutually determine a general strategy for such review in advance of its conduct. Such accountant shall not disclose any information except that which should properly be contained in a cost report required under this Agreement The parties agree that all information subject to review under this Section 3.4 is confidential and that any reviewing party shall retain and cause its accountant to retain all such information in confidence. A party shall not be entitled under this Section 3.4.2 to audit more than once the records of the other party with respect to any calendar year.

3.5 Regulatory Matters.

3.5.1 Regulatory Approvals. Unless otherwise required by law in the relevant jurisdiction, [**********]. Each party shall use commercially reasonable efforts to file for and obtain all necessary Regulatory Approvals for which it is responsible hereunder within a reasonable period.

3.5.2 Interaction with Regulatory Agencies. [**********
****
**********]

3.5.3 Regulatory Reporting. During the term of this Agreement, in order to comply with applicable regulations of the FDA and other applicable regulatory agencies, the parties agree that they shall establish procedures for reporting to the appropriate regulatory agencies any adverse events, technical complaints or other reportable events that may occur with respect to the manufacture, supply, use and clinical testing of Bulk Drug Substance, the Drug Product Candidate or Drug Product hereunder.

3.6 Assistance Rights.

If either party (the "First Party") fails unreasonably, other than as a result of Force Majeure or a failure of the other party to discharge its obligations hereunder, to carry out the

 Core Development Activities allocated to it under the Core Development Plan in accordance with the schedule therefor, then the other party may, after ninety (90) days prior written notice to the First Party, undertake that particular activity and complete it at its own expense if the First Party

has not at such time begun to carry out such activity in a manner reasonably likely to cure its default. Such party shall be entitled to reasonable cooperation and assistance from the First Party to accommodate its efforts, including assignment to such party of sponsorship of regulatory filings if necessary to permit the exercise by such party of its rights under this Section 3.6. If any such activity is properly conducted, conforms to the requirements of the Core Development Plan, and is used in any part by the First Party to advance development of the Drug Product Candidate or the Drug Product hereunder, the out-of-pocket cost of performing that activity will be reimbursed to the party incurring the cost as promptly as practicable.

3.7 Conduct of the Development Program.

3.7.1 Efforts. Both VERTEX and SERONO will use diligent and commercially reasonable efforts, consistent with the provisions of this Agreement, the requirements of the Development Plan and sound and reasonable business practices and judgment, to develop the Drug Product Candidate and obtain Regulatory Approval, as soon as reasonably practicable, for commercial sale of the Drug Product in North America and the European Union, devoting the same degree of attention and diligence that each such party devotes to the development of its other compounds of comparable commercial potential. VERTEX and SERONO will each promptly notify the other in writing if it should determine that development of the Drug Product Candidate or Drug Product is not technically feasible or commercially justifiable, specifying in reasonable detail the reasons for that determination.

3.7.2 Standards. Both parties agree to conduct the Development Program in accordance with the terms and conditions of this Agreement and in conformity with generally accepted standards of good laboratory practices and good clinical practices and with all applicable national, state and local laws, guidelines, rules and regulations including without limitation the United States Food, Drug and Cosmetic Act and guidelines, rules and regulations promulgated by the FDA.

3.7.3 Records. In conformity with standard pharmaceutical and biotechnology industry practices and the terms and conditions of this Agreement, each party shall prepare and maintain complete and accurate written records, accounts, notes, reports and data with respect to all laboratory work conducted in the performance of the Development Program. Each party shall prepare and maintain, or have prepared and maintained, complete and accurate written records, data and information with respect to all clinical trials performed in the conduct of the

 Development Plan as required by applicable national, state and local laws, guidelines, rules and regulations, including without limitation the United States Food, Drug and Cosmetic Act and guidelines, rules and regulations promulgated by the FDA.

3.7.4 Ownership of Technology.

(a) No Ownership by Employees. All employees of VERTEX and SERONO who are expected to participate in the Development Program have signed, or before any such participation will sign, agreements with VERTEX or SERONO, respectively, regarding proprietary information and inventions in a form reasonably considered by the employer and its counsel to assure the employer's Control of any Technology invented, discovered or developed by such employees.

(b) No Ownership by Agents. VERTEX and SERONO shall each enter into customary agreements with its agents that provide that all of such agents' right, title and interest in, to and under any Technology invented, discovered or developed by such agents shall be assigned or licensed to VERTEX or SERONO as the case may be.

3.8 Coordination of Far East Development Activities.

VERTEX will be responsible for coordinating those development activities being conducted by its collaborator in the Far East with Core Development Activities being conducted hereunder.

ARTICLE IV -- MANUFACTURE AND SUPPLY

4.1 Supply of Bulk Drug Substance and Drug Product for Development.

VERTEX will be responsible for manufacturing and supply of all Bulk Drug Substance, and SERONO will be responsible for preparing the Drug Product from Bulk Drug Substance, in each case as necessary for the conduct of the Development Plan in the Territory. [**********
****
**********] Supply of Bulk Drug Substance and Drug Product for development purposes shall be undertaken pursuant to the provisions of a supply agreement to be negotiated by the parties, including such customary representations, warranties, covenants and conditions as are necessary or appropriate for transactions

of this type, not inconsistent with the terms and conditions hereof and satisfactory in form and substance to the parties and their legal advisors.

 4.2 Supply of Bulk Drug Substance and Drug Product for Commercial Purposes.

VERTEX will supply and SERONO shall purchase from VERTEX all of SERONO's requirements for Bulk Drug Substance for manufacture of Drug Product sold in the Exclusive Territory, pursuant to terms and conditions set forth in Section 6.2 hereof. In North America, pursuant to the North American Joint Venture as described in Section 5.2, VERTEX will supply all requirements for Bulk Drug Substance, and SERONO will supply all requirements for Drug Product formulated from Bulk Drug Substance provided by VERTEX, [**********]and otherwise pursuant to the provisions of a supply agreement to be negotiated by the parties, including such customary representations, warranties, covenants and conditions as are necessary or appropriate for transactions of this type, not inconsistent with the terms and conditions hereof and satisfactory in form and substance to the parties and their legal advisors.

4.3 Manufacturing Technology.

Manufacturing technology not developed under the Research Program or a Development Program, which belongs to one party and which would be useful to the other party in discharging its manufacturing obligations hereunder, shall be made available to the manufacturing party for that purpose, subject to negotiation of a reasonable royalty or other compensation arrangement. If either party (a "Contracting Party") engages an Affiliate or a Third Party in the course of the Development Program to provide assistance to the Contracting Party in the development of processes useful for the manufacture of Bulk Drug Substance or Drug Product, the Contracting Party will ensure that any processes belonging to that Affiliate or Third Party and made available to the Contracting Party will also be made available to the other party on the same terms offered to the Contracting Party.

4.4 Packaging.

SERONO will be responsible for packaging the Drug Product Candidate and Drug Product for development purposes and for commercial sale.

4.5 Subcontracting.

VERTEX shall not contract with any Third Party to manufacture Bulk Drug Substance without prior consultation and review with SERONO and will not contract with any such Third Party which does not have a demonstrated ability to deliver high quality pharmaceutical products on a timely basis at volumes likely to be required by VERTEX and SERONO. VERTEX will notify SERONO of its intention to subcontract manufacture of Bulk Drug Substance not less than [**********]prior to concluding a manufacturing

 arrangement with any Third Party. [**********]

ARTICLE V -- COMMERCIALIZATION

5.1 Global Marketing and Sales.

As set forth in Section 2.1 above, SERONO has exclusive rights to the Drug Product in the Exclusive Territory, and the parties have co-exclusive rights to the Drug Product in North America pursuant to the North American Joint Venture to be established under Section 5.2 below. SERONO will prepare a detailed marketing plan for the launch of the Drug Product in the Exclusive Territory, and will provide the plan to VERTEX not later than [**********]after submission of the initial application for Regulatory Approval of the Drug Product anywhere in the Exclusive Territory. The parties will attempt to coordinate their marketing activities relative to the Drug Product in North America and the Exclusive Territory.

5.2 Marketing in North America

VERTEX and SERONO will market and sell the Drug Product in North America under the terms of a joint venture or other mutually agreeable structure (the "North American Joint Venture") which shall be negotiated between the parties in good faith and established within [**********]. The documentation for the North American Joint Venture will incorporate such customary representations, warranties, covenants and conditions as are necessary or

appropriate for transactions of this type, will be satisfactory in form and substance to the parties and their legal advisors, and will also incorporate all of the principles set forth below.

(a) Joint Marketing Committee. VERTEX and SERONO will form a Joint Marketing Committee ("JMC") which will include an equal number of representatives designated by each party. At least one of SERONO's representatives shall also be a member of the group within SERONO responsible for development and implementation of SERONO's marketing plan for the Drug Product in the Exclusive Territory, and therefore capable of assisting in the coordination of the parties' marketing efforts throughout the Territory. The JMC will be the principal organization through which the marketing of the Drug Product in North America is planned, administered, evaluated and effected. The JMC may choose to designate a Committee Chair. In such event, if one party is making a contribution to Direct Marketing Costs (as defined in Section 5.2(c) below) for any year which is disproportionately greater than the contribution of the other party, the former party shall be entitled to designate the Chair for that year. Otherwise, the right

License, Development and Commercialization Agreement -- Confidential -- Page 17 to designate the Chair shall rotate from party to party on an annual basis. The JMC will periodically meet as necessary, depending on the level of marketing activity at the time; provided that either party may request at any time that a meeting of the JMC be scheduled and in such event the parties shall cooperate in good faith to hold the meeting at a mutually convenient place and time (but in any event within [**********]after the original request). The JMC will prepare and oversee the implementation of a detailed marketing plan (the "North American Marketing Plan") for the launch of the Drug Product in North America. The North American Marketing Plan will contain among other things budgets, schedules, product positioning, pricing, market research plans and results, sales force deployment, information concerning competition and competitors, and other customary planning and marketing material with respect to marketing and launch of the Drug Product. The North American Marketing Plan will be periodically updated to reflect changes in market information, sales performance and forecasts, sales force deployment, and information concerning competition and competitors.

(b) Profit-sharing. VERTEX and SERONO will share equally in Operating Profits and Operating Losses from sales of the Drug Product in North America. [**********
**********]
The JMC will direct payment by one party to the other of any amount necessary to equalize each party's share of Operating Profits or Operating Losses for the reporting period; provided that neither party will be reimbursed for any portion of its actual Allowable Expenses incurred in any year which exceeds [**********]of its budgeted share of Allowable Expenses for that year under the North American Marketing Plan, unless such excess amount has been approved in advance by the JMC. The parties respective shares of Operating Profits may be subject to adjustment pursuant to Section 5.2(f) below.

(c) Roles and Responsibilities of the Parties. The North American Joint Venture will provide each party the opportunity
[**********
****
**********]In allocating tasks between VERTEX and SERONO, the JMC will attempt to assign roles to each party which are reasonable in relation to that party's capabilities and consistent with relevant marketing requirements. As used in this Agreement, [**********
**********]As part of the North American Joint Venture to be negotiated between the Parties pursuant to this Section 5.2, the Parties will negotiate in good faith how Direct Marketing

License, Development and Commercialization Agreement -- Confidential -- Page 18 Costs will be allocated where the Drug Product is Detailed together with another product or products.

(d) Operational Issues. Except for those matters which are the responsibility of the JMC or as otherwise provided in this Agreement, each party will be free to make its own decisions concerning the Detailing of the Drug Product by its sales force in North America. The role of the JMC in this respect shall be one of coordination, such that the individual efforts of each party may be maximized and that duplication of effort may be kept to a minimum.

(e) Booking of Sales. Customer orders for the Drug Product in North America will be credited by the North American Joint Venture or as the parties may hereafter agree.

(f) Revision of Profit-sharing Formula. The parties acknowledge that in the future one party may wish to commit substantially greater financial or other resources than the other party to the sales and marketing of the Drug Product in North America. In such event, if VERTEX and SERONO shall disagree on the total amount of the annual proposed budget for years subsequent to the first full calendar year following the First Commercial Sale of the Drug Product, and
[**********
**********]

(g) Training. The parties will consult on training programs to ensure a consistent, focused promotional strategy for the Drug Product.

(h) Advertising. Neither party shall engage in any advertising or use any label, package, literature or other written material in connection with the promotion of the Drug Product in North America unless the specific form and content is approved by the JMC.

(i) Supply of Bulk Drug Substance and Drug Product. VERTEX shall supply Bulk Drug Substance to SERONO for manufacture into Drug Product for sale in North America, and SERONO shall manufacture Drug Product from Bulk Drug Substance supplied by VERTEX, in each case for compensation
[**********].

5.3 Co-labeling.

5.3.1 North America. To the extent not prohibited by law or regulation and subject to Regulatory Approval, the Drug Product (including labels, packaging and inserts) and all promotional materials for the same sold in North America will bear the company names and logos of both SERONO and VERTEX (and/or, the name and logo of the North American Joint Venture or as the parties may otherwise agree) with equal prominence (including equal sized type face), or if equal prominence is prohibited by law, with such relative prominence as may otherwise be

 permitted by law. Trademarks used in North America will be jointly owned by VERTEX and SERONO, or by the North American Joint Venture, or as the parties may otherwise agree.

5.3.2 European Union. If not prohibited under regulations of the European Union or any of its agencies responsible for Regulatory Approval of pharmaceuticals, the labels, packaging and inserts for the Drug Product packaged for sale in the European Union will bear the company names and logos of both SERONO and VERTEX with equal prominence (including equal sized type face) or if equal prominence is not permitted under applicable regulations with such relative prominence as may in fact be permitted. If the foregoing is prohibited under applicable regulations of the European Union, then to the extent not prohibited under applicable regulations, the labels, packaging and inserts for the Drug Product will bear VERTEX's company name and logo with the term "under license from." SERONO will also determine the right of VERTEX under relevant regulations of the European Union to be referenced, and its name and logo featured, in any promotional material relative to the Drug Product used in the European Union. VERTEX's name and logo will be included, in the manner provided above relative to packaging and labeling, if the relevant regulations do not prohibit it. SERONO will permit VERTEX to review all material regulatory filings in the Exclusive Territory which relate to product labeling, and all proposed labels, packaging, package inserts and promotional materials required under the foregoing provisions to bear VERTEX's name, prior to the filing of any such material with any regulatory authority.

5.3.3 Communications. SERONO will immediately inform VERTEX of any material regulatory communications received by SERONO or its agents which might operate to restrict VERTEX's labeling rights under this section, and of any advice which it receives from its advisors with respect to any such restrictions.

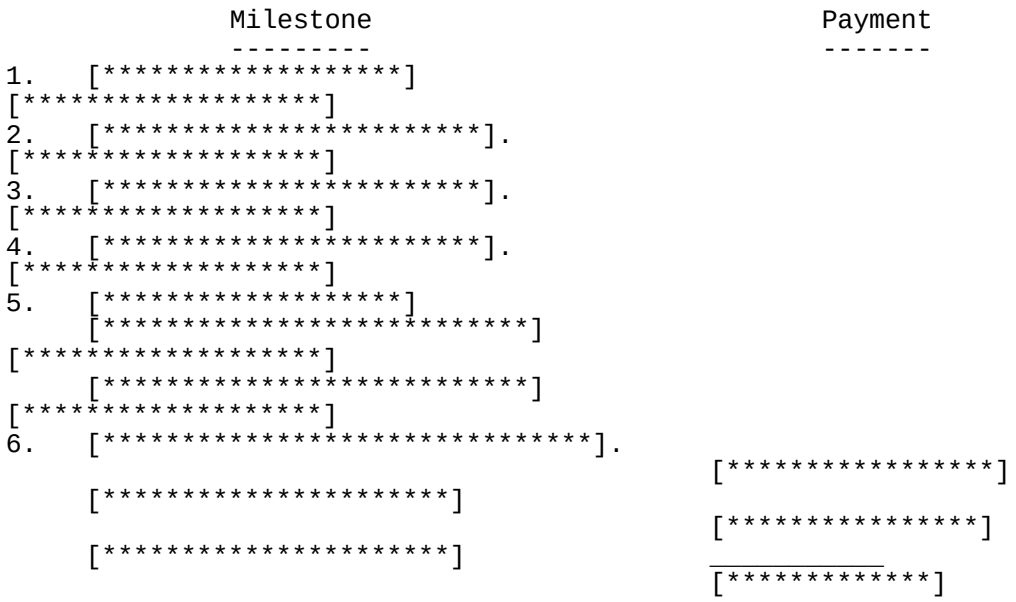
5.4 Due Diligence.

Following the First Commercial Sale of the Drug Product and until the expiration of this Agreement, SERONO shall use diligent and commercially reasonable efforts to keep the Drug Product reasonably available to the public in the Major Market countries, devoting the same degree of attention and diligence to such efforts that it devotes to such activities for other of its products of comparable market potential. For purposes of this Section 5.4, "Major Markets" shall mean the countries of the European Union, Brazil and Argentina. SERONO shall promptly notify VERTEX if it shall determine that the marketing and sale of the Drug Product in any Major Market country is not commercially reasonable or economically profitable or if for other unforeseen reasons further commercial support of the Drug Product in any country is no longer prudent or practical.

ARTICLE VI -- PAYMENTS

6.1 Development Payments by SERONO.

6.1.1 Payments. In consideration of the grant of the license set forth in Section 2.1 hereof, SERONO will make the following payments to VERTEX upon the achievement of any of the following milestones with respect to the Drug Product Candidate or Drug Product in the Territory, upon the further terms and conditions set forth below.



6.1.2 Payments to be Made Only Once. Milestone payments are payable only once with respect to the Drug Product Candidate and Drug Product. In addition, if the Drug Product Candidate has the same active metabolite as a drug product candidate being developed under a separate License Agreement (as defined in the Research Agreement) between the parties (the "Alternative Candidate"), then the Drug Product Candidate shall be deemed a "Prodrug" of the Alternative Candidate. If the Prodrug is being developed hereunder for one or more Indications for which it is not commercially or scientifically feasible to develop the Alternative Candidate, then the Prodrug shall be considered a separate drug product candidate from the Alternative Candidate, and therefore milestones may be collected in connection with its development hereunder. Milestones shall not otherwise be payable with respect to the Prodrug if comparable milestones have previously been paid in connection with the development of the Alternative Candidate pursuant to the separate License Agreement between the parties. If any milestone is achieved with respect to the development of the Drug Product Candidate or Drug Product, any previously unpaid, lower numbered milestone for the Drug Product Candidate or Drug Product will become immediately due and payable; provided that milestone 5.a. with respect

 to the Drug Product will not be payable solely by reason of attainment of milestone 6.b. with respect to the Drug Product, and similarly, milestone 5.b. will not be payable solely by reason of the attainment of milestone 6.a.

6.1.3 Timing and Method of Payments. Milestone payments shall be made on or before the [**********]following the occurrence of the event giving rise to the milestone payment obligation hereunder; provided that the first milestone payment referenced above with respect to the Drug Product Candidate shall be due and payable within [**********] of SERONO's receipt from VERTEX of an executed original of this Agreement. All payments shall be made by wire transfer in United States dollars to the credit of such bank account as may be designated by VERTEX in writing to SERONO from time to time. Any payment which falls due on a date which is a Saturday, Sunday or a legal holiday in the Commonwealth of Massachusetts may be made on the next succeeding day which is not a Saturday, Sunday or a legal holiday in the Commonwealth of Massachusetts.

6.1.4 Substitute Drug Product Candidate or Drug Product. If the Drug Product Candidate or Drug Product is developed to replace a drug product candidate or drug product being developed for the same Indication or Indications under a separate License Agreement (as defined in the Research Agreement) between the parties and such other drug product candidate or drug product has been abandoned during the term of this Agreement for any scientific or medical reasons after any one or more comparable milestone payments under such License Agreement have been made, then no milestone payment shall be required hereunder with respect to the Drug Product Candidate or Drug Product if such comparable milestone payment has already been made with respect to the abandoned drug product candidate or drug product.

6.2 Commercial Supply Price.

6.2.1 Purchase of Bulk Drug Substance. Except as otherwise provided herein, SERONO, its Affiliates and sublicensees shall purchase from VERTEX all of their respective requirements of Bulk Drug Substance for manufacture of Drug Product for sale in the Exclusive

Territory.

6.2.2 Supply Price. [**********]

[**********]

[**********]

[**********]

[**********]

[**********]

[**********]

[**********]

6.2.3 Payment. The supply price for each unit of Bulk Drug Substance purchased by SERONO from VERTEX under this Section 6.2 shall initially be calculated during any year based on [**********
**********], which shall be provided by SERONO to VERTEX within [********** **********] prior to commencement of that year. Forecasts shall be updated quarterly to reflect actual experience and
[**********
**********]
Payments due to VERTEX based upon
[**********] shall be made within
[**********] of receipt from VERTEX of an invoice for Bulk Drug Substance purchased by SERONO under the terms of the Supply Agreement described in Section 6.2.6 hereof,
and [**********
**********]

6.2.4 Adjustment to Supply Price. If in any country no Valid Patent Claims of a VERTEX Patent or a Joint Patent claiming the Drug Product exist, then [**********
**********]

6.2.5 Third Party Manufacture. Subject to the terms of Section 4.5 hereof, VERTEX may contract with any Third Party as a manufacturing subcontractor.

6.2.6 Bulk Drug Substance Supply Terms. All Bulk Drug Substance manufactured by VERTEX for SERONO hereunder shall be supplied to SERONO (for formulation and packaging) pursuant to the terms of a supply agreement to be negotiated by the parties and containing such customary representations, warranties, covenants and conditions as are necessary or appropriate for transactions of this type, not inconsistent with the terms and conditions hereof and satisfactory in form and substance to the parties and their legal advisors.

 6.3 Sales Reports.

6.3.1 Reports. During the term of this Agreement and after the First Commercial Sale of the Drug Product in the Exclusive Territory, SERONO shall furnish or cause to be furnished to VERTEX on a quarterly basis a written report covering such calendar quarter showing (i) the Net Sales of the Drug Product in each country in the Exclusive Territory during such calendar quarter by SERONO and each Affiliate and sublicensee; (ii) amounts due VERTEX or SERONO under
Section 6.2 hereof with respect to the purchase of Bulk Drug Substance, and the basis for calculating those amounts due (including unit sales data); (iii) withholding taxes, if any required by law to be deducted in respect of any such sales, and evidence of payment thereof; and (iv) dispositions of the Drug Product other than pursuant to sale for cash. With respect to Net Sales of the Drug Product received in a currency other than U.S. Dollars, the Net Sales shall be expressed in the domestic currency of the party making the sale, together with the U.S. Dollar equivalent of the amount, calculated using SERONO's then-current standard exchange rate methodology (which shall be specified, along with the rates actually used) for the translation of foreign currency sales into U.S. Dollars. In each report the methodology will be disclosed, will be identical to that employed by SERONO, generally, in its external financial reporting, as reviewed and approved by its independent auditors and will be in conformity with SERONO's usual and customary general

accounting principles consistently applied. The foregoing quarterly reports shall be due on or before the thirtieth (30th) day following the close of each calendar quarter. SERONO will also provide VERTEX, within ten (10) business days after the end of each calendar quarter, with a report showing SERONO's best estimate of Net Sales for that calendar quarter based on information available to SERONO at the time of the report.

6.3.2 Currency. All payments hereunder shall be made in U.S. Dollars. If at any time legal restrictions prevent the prompt remittance of any payments with respect to any country of the Exclusive Territory where the Drug Product is sold, SERONO or its Affiliates or sublicensees shall have the right and option to make such payments by depositing the amount thereof in local currency to VERTEX's account in a bank or depository in such country.

6.3.3 Audit. SERONO shall keep and shall cause to be kept accurate records in sufficient detail to enable the amounts due hereunder to be determined and to be verified by VERTEX. Upon the written request of VERTEX, at VERTEX's expense and not more than once in any calendar year, SERONO shall permit an independent accountant of national prominence selected by VERTEX, and approved by SERONO, to have access during normal business hours to those records of SERONO as may be reasonably necessary to verify the accuracy of the sales reports furnished by SERONO pursuant to this Section 6.3, in respect of any calendar year ending not more than two (2) years prior to the date of such notice. The parties shall mutually

 determine a general strategy for such audit in advance of its conduct. Such accountant shall not disclose any information except that which should properly be contained in a sales report required under this Agreement. SERONO shall include in each sublicense entered into by it pursuant to this Agreement a provision requiring the sublicensee to keep and maintain adequate records of sales made pursuant to such sublicense and to grant access to such records by the aforementioned independent accountant for the reasons specified in this Section 6.3. Upon the expiration of two (2) years following the end of any calendar year, the calculation of amounts payable with respect to such calendar year shall be binding and conclusive upon VERTEX, and SERONO and its Affiliates and sublicensees shall be released from any liability or accountability with respect to payments for such year. The report prepared by such independent accountant, a copy of which shall be sent or otherwise provided to SERONO by such independent accountant at the same time it is sent or otherwise provided to VERTEX, shall contain the conclusions of such independent accountant regarding the audit and will specify that the amounts paid to VERTEX pursuant thereto were correct or, if incorrect, the amount of any underpayment or overpayment. If such independent accountant's report shows any underpayment, SERONO shall remit or shall cause its Affiliates or sublicensees to remit to VERTEX within thirty (30) days after SERONO' receipt of such report, (i) the amount of such underpayment and (ii) if such underpayment exceeds ten percent (10%) of the total amount owed for the calendar year then being audited, the reasonable and necessary fees and expenses of such independent accountant performing the audit, subject to reasonable substantiation thereof. Any overpayments shall be fully creditable against amounts payable in subsequent payment periods or remitted to SERONO, at SERONO's request. VERTEX agrees that all information subject to review under this Section 6.3 or under any sublicense agreement is confidential and that VERTEX shall retain and cause its accountant to retain all such information in confidence.

6.3.4 Interest. In case of any delay in payment by one party to the other hereunder not occasioned by Force Majeure, interest at the rate of [**********]per month, assessed from the thirty-first (31st) day after the due date of the payment until the date paid, shall accrue on such payment and shall be due from such party upon prior written notice.

6.4 Withholding Tax.

If during the term of this Agreement, withholding tax should be required by law to be deducted from any payments required to be made by SERONO to VERTEX hereunder, SERONO, its Affiliates or sublicensees shall deduct such withholding tax from such payment and pay it to the proper taxing authority and evidence of such payment shall be secured and sent to VERTEX within one (1) month of such payment. The parties shall do all such lawful acts and

 things and sign all such lawful deeds and documents as either party may reasonably request from the other party to enable SERONO, its Affiliates and/or sublicensees to take advantage of any applicable legal provision or any double taxation treaties with the object of paying the sums due to VERTEX hereunder without withholding any tax.

6.5 Adjustment in Connection with Development of a [**********].

6.5.1 VERTEX Sole Development. If VERTEX notifies SERONO pursuant to the last sentence of Section 3.3.3 of the Research Agreement that it has chosen to continue development and commercialization of a Refused Candidate which is a [**********],then the provisions set forth below shall be applicable thereafter to the further development and commercialization under this Agreement of the

Drug Product Candidate and Drug Product.

(a) The Drug Product Candidate and Drug Product shall be developed and marketed thereafter [**********]; (b) VERTEX will transition the manufacture of Bulk Drug Substance incorporated into the Drug Product to SERONO, at VERTEX's cost, by delivering to SERONO the VERTEX Technology and providing to SERONO the technical support in connection therewith reasonably necessary to enable SERONO to manufacture the Bulk Drug Substance in compliance with any and all current Regulatory Approvals. Such VERTEX Technology shall be delivered to SERONO in such a way as to communicate it to SERONO promptly, effectively and economically. Until such transition is completed, VERTEX shall continue to supply Bulk Drug Substance to SERONO hereunder [**********]; (c) The provisions of Article V of this Agreement relating to the creation and operation of the North American Joint Venture will be inapplicable to the Drug Product, and any North American Joint Venture already in existence with respect to the Drug Product shall be dissolved in a reasonable and orderly manner by agreement of the parties; (d) SERONO shall pay to VERTEX an annual royalty hereunder equal to [***** **********]; (e) [**********] and (f) The parties will act reasonably and in good faith to accomplish the foregoing as expeditiously as practicable under the circumstances, including without limitation by executing and delivering any necessary or appropriate amendments to this Agreement.

6.5.2 Joint Development. If SERONO elects to exercise its Development Election [**********] then the following provisions shall apply to the development of any [**********] as to which an application for Regulatory Approval was not filed in either the United States or the European Union on the date of exercise of the Development Election. If SERONO chooses not to continue development of the Reference Compound it will so notify VERTEX in writing at any time prior to the submission of the first application for Regulatory Approval with respect to the Reference Compound in either the United States or the European Union. The notice shall contain a schedule of [**********] By notice delivered to SERONO within [**********] after receipt of SERONO's notice, VERTEX may in the alternative either: (a) elect to concur with SERONO and suspend development of the Reference Compound, which shall thereafter remain subject to the provisions of this Agreement except for those provisions which would require continuing development of the Reference Compound, or (b) terminate this Agreement with respect to the Reference Compound and acquire all rights to the Reference Compound held by SERONO under this Agreement. In the event VERTEX chooses alternative (b) above, it shall pay to SERONO within [**********] and SERONO shall use reasonable efforts to transfer to VERTEX any existing regulatory filings and clinical trials agreements, and otherwise assist in a smooth transition to VERTEX of the Development Program relative to the Reference Compound.

ARTICLE VII -- REFUSED CANDIDATES AND FINAL SERONO CANDIDATES

7.1 General.

If the Drug Product Candidate is a "Refused Candidate" as provided in Section 3.3 of the Research Agreement, the specific provisions of Section 7.2 shall apply, and if the Drug Product Candidate is a Final SERONO Candidate under Section 3.4 of the Research Agreement, the specific provisions of Section 7.3 shall apply.

7.2 Refused Candidate.

7.2.1 Additional Payment. VERTEX will provide to SERONO as part of the Development Information (as defined in the Research Agreement) with respect to the Drug Product Candidate a detailed estimate of the Core Development Costs incurred by VERTEX with respect to the development of the Drug Product Candidate as of the date VERTEX provides such Development Information to

SERONO (the "Second Opportunity Costs"). If SERONO has exercised its Development Election (as defined in the Research Agreement) with respect to the Drug Product Candidate, it shall pay to VERTEX
[**********

****
****
**********].

7.2.2 Other Payments. Any milestone payments under Section 6.1 hereof which would have become due under this Agreement had the Drug Product Candidate been selected by SERONO when initially proposed by VERTEX pursuant to the Research Agreement will be made by SERONO within [**********]of SERONO's receipt from VERTEX of an executed original of this Agreement.

7.2.3 [**********]

7.3 Final SERONO Candidate.

7.3.1 Development. SERONO shall have the sole right and responsibility, at its expense, for the development of the Drug Product Candidate, and the provisions of Article III hereof other than Sections 3.1, 3.7 and 3.8 (which to the extent inconsistent with such rights and responsibilities of SERONO shall be amended) shall be inapplicable to the Drug Product.

7.3.2 Supply. SERONO shall have the sole right and responsibility, at its expense, for the manufacture of all Bulk Drug Substance to meet its needs in connection with the development and commercial sale of the Drug Product Candidate; provided, however, that at SERONO's expense, VERTEX will deliver to SERONO the VERTEX Technology and provide to SERONO the technical support in connection therewith reasonably necessary to enable SERONO to manufacture Bulk Drug Substance in compliance with any and all current Regulatory Approvals. Such VERTEX Technology shall be delivered to SERONO in such a way as to communicate it to SERONO promptly, effectively and economically. Notwithstanding the foregoing, at the written request of SERONO, VERTEX will supply SERONO with Bulk Drug Substance [**********
**********]Such supply shall be made pursuant to the provisions of a supply agreement to be negotiated by the parties, including such customary representations, warranties, covenants and conditions as are necessary or appropriate for transactions of this type, not inconsistent with the terms and conditions hereof and satisfactory in form and substance to the parties and their legal advisors. The provisions of Article IV and Section 6.2 of this Agreement shall be inapplicable to the Drug Product.

7.3.3 Marketing. SERONO shall have the sole right and responsibility, at its expense, for selling and marketing the Drug Product worldwide and the provisions of Section 5.2

 shall be inapplicable to the Drug Product. The provisions of Sections 5.1 and
5.3 hereof to the extent inconsistent with such rights and responsibilities of SERONO shall be amended.

7.3.4 Milestones. Each of the milestone payments referenced in
Section 6.1 above and payable in connection with the development of the Drug Product Candidate or Drug Product
[**********].

7.3.5 Royalty. SERONO shall pay to VERTEX, pursuant to Section 6.3 hereof (which shall be amended to the extent inconsistent with the provisions of this Section 7.3), a royalty on Net Sales of the Drug Product equal to:

(a) [**********];

(b) [**********]

(c) [**********].

ARTICLE VIII -- TECHNOLOGY

8.1 Ownership.

All Know-How discovered or developed under a Development Program hereunder exclusively by either party or its Affiliates (directly

or through others acting on its behalf) shall be owned and Controlled by such party, subject to the provisions of this Agreement. All Patents claiming Bulk Drug Substance, the Drug Product Candidate or the Drug Product, or a formulation or prodrug thereof, invented under a Development Program hereunder by either party or its Affiliates (directly or through others acting on its behalf) shall be owned and Controlled by such party, subject to the provisions of this Agreement. All such Patents and Know-How invented, discovered, or developed, as applicable, jointly by the parties or their Affiliates (directly or through others acting on their behalf) shall be owned and Controlled jointly, subject to the provisions of this Agreement. Inventorship shall be determined in accordance with United States patent and other applicable laws. Know-How that is owned and Controlled jointly by the parties or their Affiliates shall be "Joint Know-How" and Patents that are owned and Controlled jointly by the parties or their Affiliates shall be "Joint Patents."

8.2 Patent Procurement and Maintenance.

VERTEX shall be responsible for the preparation, filing, prosecution and maintenance of all VERTEX Patents, and any Joint Patents, and SERONO shall be responsible for the preparation, filing, prosecution and maintenance of all SERONO Patents. The filing party, with the advice of the other party, shall determine the countries in which applications will be filed. VERTEX shall provide draft applications for Joint Patents to SERONO sufficiently in advance of filing for SERONO to have the opportunity to comment thereon. VERTEX shall furnish SERONO

 with copies of all substantive communications between VERTEX and applicable patent offices regarding the Joint Patents. VERTEX and SERONO shall each provide the JDC with periodic reports listing, by name, any such Patents filed by it in the United States or the European Union, along with a general summary of the claims made and the jurisdictions of filing in the Territory. Each party will provide such assistance as the other party may reasonably request in order to protect the other party's rights to Patents for which it is responsible under this Section 8.2.

8.3 Costs.

[**********
**********].
Either party may at any time elect, by written notice to the other party, to discontinue support for one or more such Patents (a "Discontinued Patent") and shall not be responsible for any costs relating to a Discontinued Patent which are incurred more than sixty (60) days after receipt of that notice by the other party. In such case, the other party may elect at its sole discretion to continue preparation, filing, prosecution or maintenance of the Discontinued Patent at its sole expense. The party so continuing shall own any such Discontinued Patent, and the party electing to discontinue support shall execute such documents of transfer or assignment and perform such acts as may be reasonably necessary to transfer sole ownership of the Discontinued Patent to the other party and enable that party to file or to continue prosecution or maintenance of the Discontinued Patent, if the other party elects to do so. In the event VERTEX elects to discontinue support for a Discontinued Patent, the license granted to VERTEX by SERONO pursuant to Section 2.2 of this Agreement shall terminate with respect to that Discontinued Patent. Discontinuance may be on a country-by-country basis or for a Patent series in total.

8.4 Infringement Claims by Third Parties.

8.4.1 Notice. If the manufacture, import, use, offer to sell or sale of Bulk Drug Substance, the Drug Product Candidate and/or the Drug Product results in a claim or reasonable apprehension of a claim against a party hereto for patent infringement or for inducing or contributing to patent infringement ("Infringement Claim"), the party first having notice of an Infringement Claim shall promptly notify the other in writing. The notice shall set forth the facts of the Infringement Claim in reasonable detail.

8.4.2 Third-Party Licenses. In the event that practicing the Technology in connection with the manufacture, import, use, offer to sell or sale of the Drug Product Candidate and/or the Drug Product in any country would require a license under a Third Party's patent, then SERONO will attempt to obtain a license under the Third Party's patent, will consult VERTEX

 regarding the terms of such license, and
[**********
****
**********]

8.4.3 Discontinued Sales, License or Defense of Suit. If the required license is either unavailable or its terms are unacceptable to SERONO, then SERONO may elect in its sole discretion to discontinue sales of the Drug Product in such country or to undertake the defense of a patent infringement action or the prosecution of a declaratory judgment action with respect to the Third Party patents.
[**********

[**********] No settlement or consent judgment or other voluntary final disposition of a suit under this Section 8.4 may be entered into without the joint consent of VERTEX and SERONO (which consent shall not be unreasonably withheld).

8.5 Infringement Claims Against Third Parties.

8.5.1 Protection of Technology. VERTEX and SERONO each agree to take reasonable actions to protect their respective Technology from infringement and from unauthorized possession or use.

8.5.2 Infringement of Technology. If any VERTEX Patents, SERONO Patents or Joint Patents are infringed or claimed to be invalid or VERTEX Know-How, SERONO Know-How or Joint Know-How is misappropriated, as the case may be, by a Third Party, the party to this Agreement first having knowledge of such infringement, claim or misappropriation, or knowledge of a reasonable probability of such infringement, claim or misappropriation, shall promptly notify the other in writing. The notice shall set forth the facts of such infringement. claim or misappropriation in reasonable detail. The owner of the Technology, or VERTEX, in the case of joint ownership between the parties hereto, shall have the primary right, but not the obligation, to institute, prosecute, and control with its own counsel any action or proceeding with respect to infringement, claimed invalidity or misappropriation of such Technology and the other party shall have the right, at its own expense, to be represented in such action by its own counsel. If the party having the primary right or responsibility to institute, prosecute, and control such action or proceeding fails to do so within a period of ninety (90) days after receiving notice of the infringement, claim or misappropriation, the other party shall have the right to bring and control any such action or proceeding by counsel of its own choice, and the party which had the primary responsibility shall have the right, at its own expense, to be represented in any such action or proceeding by counsel of its own choice. If one party brings any such action or proceeding, the second party may be joined as a party plaintiff, and, in case of joining, the second party agrees to give the first party reasonable assistance and authority to file and to

 prosecute such suit. In any case the second party shall provide all reasonable cooperation to the first party in connection with such action or proceeding.
[**********
**********] No settlement or consent judgment or other voluntary final disposition of a suit under this Section 8.5 may be entered into without the joint consent of VERTEX and SERONO (which consent shall not be unreasonably withheld).

8.6 Notice of Certification.

VERTEX and SERONO each shall immediately give notice to the other of any certification filed under the U.S. Drug Price Competition and Patent Term Restoration Act of 1984 claiming that a VERTEX Patent or a SERONO Patent is invalid or that any infringement will not arise from the manufacture, use or sale of any product by a Third Party. If VERTEX decides not to bring infringement proceedings against the party making such a certification, VERTEX shall give notice to SERONO of its decision not to bring suit within twenty-one
(21) days after receipt of notice of such certification. SERONO may then, but is not required to, bring suit against the party that filed the certification. Any suit by SERONO or VERTEX shall either be in the name of SERONO or in the name of VERTEX, or jointly by SERONO and VERTEX, as may be required by law. For this purpose, the party not bringing suit shall execute such legal papers necessary for the prosecution of such suit as may be reasonably requested by the party bringing suit.

8.7 Patent Term Extensions.

The parties shall cooperate in good faith with each other in gaining patent term extension wherever applicable to VERTEX Patents and SERONO Patents covering the Drug Product Candidate or Drug Product. SERONO and VERTEX shall mutually determine which patents shall be extended. All filings for such extension shall be made by the party who owns the patent, provided, however, that in the event that the party who owns the patent elects not to file for an extension, such party shall (i) inform the other party of its intention not to file and (ii) grant the other party the right to file for such extension.

8.8 No Implied Rights.

Except as expressly provided in this Agreement, no right or license to use any intellectual property of either party is granted hereunder by implication or otherwise.

ARTICLE IX -- REPRESENTATIONS AND WARRANTIES

9.1 Representations and Warranties of VERTEX.

VERTEX represents and warrants to SERONO as follows:

(a) Authorization. This Agreement has been duly executed and delivered by VERTEX and constitutes the valid and binding obligation of VERTEX, enforceable against

License, Development and Commercialization Agreement -- Confidential -- Page 32 VERTEX in accordance with its terms except as enforceability may be limited by bankruptcy, fraudulent conveyance, insolvency, reorganization, moratorium and other laws relating to or affecting creditors' rights generally and by general equitable principles. The execution, delivery and performance of this Agreement have been duly authorized by all necessary action on the part of VERTEX, its officers and directors. The execution, delivery and performance of this Agreement does not breach, violate, contravene or constitute a default under any contracts, arrangements or commitments to which VERTEX is a party or by which it is bound nor does the execution, delivery and performance of this Agreement by VERTEX violate any order, law or regulation of any court, governmental body or administrative or other agency having authority over it.

(b) No Third Party Rights. VERTEX owns or possesses adequate licenses or other rights to use all VERTEX Technology and to grant the licenses and rights herein.

(c) Third Party Patents. Except as disclosed in writing between the parties to this Agreement or their respective agents, VERTEX is not aware of any issued patents or pending patent applications that, if issued, would be infringed by the development, manufacture, use, import, offer to sell or sale of the Drug Product Candidate, Bulk Drug Substance or Drug Product pursuant to this Agreement.

9.2 Representations and Warranties of SERONO.

SERONO represents and warrants to VERTEX as follows:

(a) Authorization. This Agreement has been duly executed and delivered by SERONO and constitutes the valid and binding obligation of SERONO, enforceable against SERONO in accordance with its terms except as enforceability may be limited by bankruptcy, fraudulent conveyance, insolvency, reorganization, moratorium and other laws relating to or affecting creditors' rights generally and by general equitable principles. The execution, delivery and performance of this Agreement have been duly authorized by all necessary action on the part of SERONO, its officers and directors. The execution, delivery and performance of this Agreement does not breach, violate, contravene or constitute a default under any contracts, arrangements or commitments to which SERONO is a party or by which it is bound nor does the execution, delivery and performance of this Agreement by SERONO violate any order, law or regulation of any court, governmental body or administrative or other agency having authority over it.

(b) Third Party Rights. SERONO owns or possesses adequate licenses or other rights to use all SERONO Technology in accordance with the provisions of this Agreement and to grant the licenses herein.

License, Development and Commercialization Agreement -- Confidential -- Page 33 (c) Third Party Patents. Except as disclosed in writing between the parties to this Agreement or their respective agents, SERONO is not aware of any issued patent or pending patent applications that, if issued, would be infringed by the development, manufacture, use, import, offer to sell or sale of the Drug Product Candidate, Bulk Drug Substance or Drug Product pursuant to this Agreement.

ARTICLE X -- CONFIDENTIALITY

10.1 Undertaking.

Each party shall keep confidential, and other than as provided herein, shall not use or disclose, directly or indirectly, any trade secrets, other knowledge, information, documents or materials, owned or Controlled by the other party, which have been disclosed (in tangible or electronic form or as evidenced by meeting minutes or similar materials) to such party after the Effective Date and designated confidential by the disclosing party (any such information, "Confidential Information"). All Technology and all Confidential Information under the Research Agreement shall be deemed Confidential Information. Neither VERTEX nor SERONO shall use such Confidential Information of the other party for any purpose, including the filing of patent applications containing such information, without the other party's consent (which shall not be unreasonably withheld), other than for conducting the Development Program or as otherwise permitted under this Agreement.

10.1.1 Nondisclosure and Nonuse. Each party shall take any and all lawful measures to prevent the unauthorized use and disclosure of such Confidential Information, and to prevent unauthorized persons or entities from obtaining or using such Confidential Information.

10.1.2 Disclosure to Affiliates and Agents. Each party will refrain from directly or indirectly taking any action which would constitute or facilitate the unauthorized use or disclosure of such Confidential Information. Each party may disclose such Confidential Information to its Affiliates, their officers, employees and agents, to authorized licensees and sublicensees (including VERTEX's Far East collaborator as provided in Section 2.3.2 hereof), and to subcontractors in connection with the development of the Drug Product Candidate or the manufacture of Bulk Drug Substance, or Drug Product, but only to the extent necessary to enable such parties to perform their obligations hereunder or under the applicable license, sublicense or subcontract, as the case may be; provided, that such officers, employees, agents, licensees, sublicensees and subcontractors have entered into appropriate confidentiality agreements for secrecy and non-use of such Confidential Information.

10.1.3 Liability. Each party shall be liable for any unauthorized use and disclosure of such Confidential Information by its Affiliates, officers, employees and agents and any such licensees, sublicensees and subcontractors.

 10.2 Exceptions.

Notwithstanding the foregoing, the provisions of Section 10.1 hereof shall not apply to Confidential Information which the receiving party can conclusively establish:

(a) has entered the public domain without such party's or its Affiliates' breach of any obligation owed to the disclosing party;

(b) is permitted to be disclosed by the prior written consent of the disclosing party;

(c) has become known to the receiving party or any of its Affiliates from a source other than the disclosing party, other than by breach of an obligation of confidentiality owed to the disclosing party;

(d) is disclosed by the disclosing party to a Third Party without restrictions on its disclosure;

(e) is independently developed by the receiving party or its Affiliates without use of or reference to the Confidential Information; or

(f) is required to be disclosed by the receiving party to comply with applicable laws or regulations or to defend or prosecute litigation, or to seek Regulatory Approval pursuant to this Agreement, provided that the receiving party takes reasonable and lawful actions to avoid or minimize the degree of such disclosure, and to have confidential treatment accorded to any Confidential Information disclosed, and provides prior written notice to the disclosing party within a time period sufficiently prior to such disclosure to permit the disclosing party to apply for a protective order or take other appropriate action to restrict disclosure. The receiving party shall fully cooperate with the disclosing party in connection with the disclosing party's efforts to obtain any such remedy.

10.3 Publicity.

The parties will agree upon the timing and content of any initial press release or other public communications relating to this Agreement and the transactions contemplated herein.

(a) Except to the extent already disclosed in that initial press release or other public communication, no public announcement concerning the existence or the terms of this Agreement or concerning the transactions described herein shall be made, either directly or indirectly, by VERTEX or SERONO, except as may be legally required by applicable laws, regulations, or judicial order, without first obtaining the approval of the other party and agreement upon the nature, text, and timing of such announcement, which approval and agreement shall not be unreasonably withheld. If in the reasonable opinion of a party's legal counsel, such a public announcement is legally required by applicable laws, regulations or judicial order, then the disclosing party will provide the other party notice reasonable under the

 circumstances of such intended announcement, and to the extent feasible under the circumstances will consult with the other party relative to the nature and scope of such intended announcement.

(b) In addition to the foregoing restrictions on public disclosure, if VERTEX concludes that a copy of this Agreement must be filed with the U.S. Securities and Exchange Commission, it will provide SERONO with a copy of the Agreement showing any sections as to which VERTEX proposes to request confidential treatment, will provide SERONO with an opportunity to comment on any such proposal and to suggest additional portions of the Agreement for confidential treatment, and will take SERONO's reasonable comments into consideration, before filing the same.

10.4 Survival.

The provisions of this Article X shall survive the termination of this Agreement and shall extend for a period of five (5) years thereafter.

ARTICLE XI -- PUBLICATION

Each of SERONO and VERTEX reserves the right to publish or publicly present the results (the "Results") of the Development Program, subject to the following terms and conditions. The party proposing to publish or publicly present the Results (the "Publishing Party") will submit a draft of any proposed manuscript, abstract or speech to the other party (the "Non-publishing Party") for comments at least [**********]prior to submission for publication or oral presentation. The Non-publishing Party shall notify the Publishing Party in writing within [**********]of receipt of such draft whether such draft contains (i) information of the Non-publishing Party which it considers to be confidential under the provisions of Article X hereof, (ii) information that if published would have an adverse effect on a patent application covering the subject matter of this Agreement, or (iii) information which the Non-publishing Party reasonably believes would be likely to have a material adverse impact on the development or commercialization of the Drug Product Candidate or Drug Product. In any such notification, the Non-publishing Party shall indicate with specificity its suggestions regarding the manner and degree to which the Publishing Party may disclose such information. In the case of item (i) above, no party may publish Confidential Information of the other party without its consent in violation of Article X of this Agreement. In the case of item (ii) above, the Non-publishing Party may request a delay and the Publishing Party shall delay such publication or presentation, for a period not exceeding [**********],to permit the timely preparation and filing of a patent application or an application for a certificate of invention on the information at issue. In the case of item (iii) above, if the Publishing Party shall disagree with the Non-publishing Party's assessment of the impact of the publication or presentation, then the issue shall be referred by

 the Publishing Party to the JDC for resolution. If the JDC is unable to reach agreement on the matter within [**********]after such referral, then the matter, if it involves the disclosure of confidential structural information with respect to a Compound, shall be referred to the Chief Executive Officers of SERONO and VERTEX, or to other members of senior management of such parties who report directly to their respective Chief Executive Officer, who shall attempt in good faith to reach a fair and equitable resolution of this disagreement. If the disagreement is not resolved in this manner within [**********]after referral to the JDC or (as to publications or presentations involving structural information) referral to the Chief Executive Officer of each party or his designee, as aforesaid, then the Chief Executive Officer of the Publishing Party shall notify the Chief Executive Officer of the Non-publishing Party of the decision of the Publishing Party as to publication or presentation of any information generated by it, subject always to the confidentiality provisions of Article X hereof. This decision shall be final, provided that such decision shall be made with reasonable regard for the interests of the Non-publishing Party and provided further that no decision shall be made to publish or present information the publication or presentation of which would have a material adverse effect on the commercial prospects of any Drug Candidate or Drug Product. The parties agree that authorship of any publication or presentation will be determined based on the customary standards then being applied in the relevant scientific journal or conference. The parties will require any agents conducting the Development Program on their behalf to comply with publication and presentation restrictions comparable to those set forth herein.

This Article XI shall terminate with the termination of this Agreement, but the provisions of Article X hereof shall continue to govern the disclosure by one party, whether by publication or otherwise, of Confidential Information of the other, during the period set forth in Section 10.4.

ARTICLE XII -- DISPUTE RESOLUTION

12.1 Governing Law, and Jurisdiction.

This Agreement shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts and of the United States of America, without giving effect to the doctrine of conflict of laws.

12.2 Dispute Resolution Process.

Except as otherwise explicitly provided herein, in the event of any controversy or claim arising out of or relating to any provision of this Agreement, or the collaborative effort contemplated hereby, the parties shall, and either party may, refer such dispute to the JDC, and failing resolution of the controversy or claim within thirty (30) days after such referral, the matter shall be referred to the Chief Executive Officer of VERTEX and the Chief Executive Officer of SERONO, or other members of senior management of such parties who report directly to their

 respective Chief Executive Officers and who

are not otherwise directly involved in the controversy or claim at issue, each with full authority from the Chief Executive Officer to settle the dispute, who shall, as soon as practicable, attempt in good faith to resolve the controversy or claim. If such controversy or claim is not resolved within sixty (60) days of the date of initial referral of the dispute to the JDC, either party shall be free to initiate proceedings based on such controversy or claim in any court having requisite jurisdiction.

ARTICLE XIII -- TERM AND TERMINATION

13.1 Term.

The term of this Agreement shall extend with respect to the Drug Product in a particular country from the Effective Date until the later of: (a) the last to expire or be invalidated of any VERTEX Patents or Joint Patents containing a Valid Patent Claim claiming the Drug Product or a method of making or using the same in that country; or (b) if there is no such Valid Patent Claim under a VERTEX Patent or Joint Patent in a particular country, [**********]. This Agreement shall expire in any event upon the later of the expiration or invalidation of the last of such Valid Patent Claims or [**********], unless the Agreement is terminated at an earlier date pursuant to Sections 13.2, 13.3 or 13.4 hereof.

13.2 Termination For Cause.

In addition to rights of termination which may be granted to either party under other provisions of this Agreement, either party may terminate this Agreement upon sixty (60) days prior written notice to the other party upon the breach by such other party of any of its material obligations under this Agreement, provided that such termination shall become effective only if the breaching party shall fail to remedy or cure the breach, or to initiate steps to remedy the same to the other party's reasonable satisfaction, within such sixty (60) day period.

13.3 Termination for Bankruptcy.

If at any time during the term of this Agreement, an Event of Bankruptcy (as defined below) relating to either party (the "Bankrupt Party") occurs, the other party (the "Other Party") shall have, in addition to all other legal and equitable rights and remedies available hereunder, the option to terminate this Agreement upon thirty (30) days' written notice to the Bankrupt Party. It is agreed and understood that if the Other Party does not elect to terminate this Agreement upon the occurrence of an Event of Bankruptcy, except as may otherwise be agreed with the trustee or receiver appointed to manage the affairs of the Bankrupt Party, the Other Party shall continue to make all payments required of it under this Agreement as if the Event of Bankruptcy had not occurred, and the Bankrupt Party shall not have the right to terminate any

 license granted herein. It is agreed and understood that all rights and licenses granted under or pursuant to this Agreement by VERTEX to SERONO are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code, as amended from time to time (the "Bankruptcy Code"), licenses or rights to "intellectual property" as defined under Section 101(35A) of the Bankruptcy Code. The parties agree that SERONO, as a recipient of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under the Bankruptcy Code. Following the occurrence of an Event of Bankruptcy with respect to VERTEX and so long as that Event of Bankruptcy continues, VERTEX will not without SERONO's prior written consent sell, transfer, assign, or otherwise dispose of, or purport to sell, transfer, assign or otherwise dispose of, any right, title or interest in, to and under VERTEX Technology that is necessary or useful for SERONO to exercise its rights under this Agreement, if those rights would be impaired in any material respect by such sale, transfer, assignment or other disposition. As used above, the term "Event of Bankruptcy" shall mean (a) dissolution, termination of existence, liquidation or business failure of either party; (b) the appointment of a custodian or receiver for either party who has not been terminated or dismissed within ninety (90) days of such appointment; (c) the institution by either party of any proceeding under national, federal or state bankruptcy, reorganization, receivership or other similar laws affecting the rights of creditors generally or the making by either party of a composition or any assignment or trust mortgage for the benefit of creditors or under any national, federal or state bankruptcy, reorganization, receivership or other similar law affecting the rights of creditors generally, which proceeding is not dismissed within ninety (90) days of filing.

13.4 Termination by SERONO.

SERONO may terminate this Agreement [**********]. In such event SERONO, at the request of VERTEX, shall assign or otherwise transfer to VERTEX all of its Regulatory Approvals with respect to the Drug Product.

13.5 Effect of Termination.

If this Agreement is not terminated at an earlier date, then upon its expiration in accordance with the last sentence of Section 13.1 hereof in a given country SERONO shall have an irrevocable, fully paid-up exclusive license, with the right to sublicense, in such country under the VERTEX Technology to develop, manufacture, have manufactured, use, sell, offer to sell and import the Bulk Drug Substance, Drug Product Candidate and Drug Product. If this Agreement is not terminated at an earlier date, then upon its expiration in accordance with Section 13.1 hereof in all countries in the Territory, SERONO shall have an irrevocable, fully paid-up exclusive license, with the right to sublicense, in the Territory under the VERTEX Technology to develop, manufacture, have manufactured, use, sell, offer to sell and import the Bulk Drug Substance,

 Drug Product Candidate and Drug Product. Upon any such termination of this Agreement in any country, VERTEX will deliver to SERONO the VERTEX Technology and provide to SERONO the technical support in connection therewith reasonably necessary to enable SERONO to manufacture Bulk Drug Substance in compliance with any and all current Regulatory Approvals. Such VERTEX Technology shall be delivered to SERONO in such a way as to communicate it to SERONO promptly, effectively and economically. At the written request of SERONO, VERTEX will continue to supply SERONO with Bulk Drug Substance under the terms of this Agreement for such period, not to exceed eighteen (18) months, as may be reasonably necessary for SERONO to procure its own supply of Bulk Drug Substance. Upon any termination of this Agreement pursuant to Sections 13.2 through 13.4 hereof, SERONO shall have the right to sell its inventory of the Drug Product for a period of six (6) months from the date of termination provided SERONO complies with the provisions of Sections 6.2 through 6.4 hereof. In the event the license granted to SERONO under Section 2.1 hereof terminates for any reason, each of SERONO's sublicensees at such time shall continue to have the rights and license set forth in their sublicense agreements; provided, however, that such sublicensee agrees in writing that VERTEX is entitled to enforce all relevant terms and conditions of such sublicense agreement directly against such sublicensee. Termination of this Agreement for any reason, or expiration of this Agreement, will not affect: (i) obligations, including the obligation for payment of any supply payments, which have accrued as of the date of termination or expiration, and (ii) rights and obligations which, from the context thereof, are intended to survive termination or expiration of this Agreement including obligations pursuant to Articles VI, VIII, X, XII, XIII, XIV and XV, to the extent applicable. Any right to terminate this Agreement shall be in addition to and not in lieu of all other rights or remedies that the party giving notice of termination may have at law or in equity or otherwise, including without limitation rights under the United States Bankruptcy Code.

ARTICLE XIV -- INDEMNIFICATION

14.1 Indemnification by VERTEX.

VERTEX will indemnify and hold SERONO and its Affiliates, and their employees, officers and directors harmless from and against any loss, damage, action, suit, claim, demand, liability, judgment, cost or expense (a "Loss"), that may be brought, instituted or arise against or be incurred by such Persons to the extent such Loss is based on or arises out of:

(a) [**********]

(b) the breach by VERTEX of any of its covenants, representations or warranties set forth in this Agreement; and

 (c) provided however, that the foregoing indemnification and hold harmless obligation shall not apply to any Loss to the extent such Loss is caused by the negligent or willful misconduct of SERONO or its Affiliates.

14.2 Indemnification by SERONO.

SERONO will indemnify and hold VERTEX, and its Affiliates, and their employees, officers and directors harmless from and against any Loss that may be brought, instituted or arise against or be incurred by such Persons to the extent such Loss is based on or arises out of:

(a) [**********
**********]

(b) the breach by SERONO of any of its covenants, representations or warranties set forth in this Agreement; and

(c) provided that the foregoing indemnification and hold harmless obligation shall not apply to any Loss to the extent such Loss is caused by the negligent or willful misconduct of VERTEX or its Affiliates.

14.3 Claims Procedures.

Each Party entitled to be indemnified by the other Party (an "Indemnified Party") pursuant to Section 14.1 or 14.2 hereof shall give notice to the other Party (an "Indemnifying Party") promptly after such Indemnified Party has actual knowledge of any threatened or asserted claim as to which indemnity may be sought, and shall permit the Indemnifying Party to assume the defense of any such claim or any litigation resulting therefrom; provided:

(a) That counsel for the Indemnifying Party, who shall conduct the defense of such claim or any litigation resulting therefrom, shall be approved by the Indemnified Party (whose approval shall not unreasonably be withheld) and the Indemnified Party may participate in such defense at such party's expense (unless (i) the employment of counsel by such Indemnified Party has been authorized by the Indemnifying Party; or (ii) the Indemnified Party shall have reasonably concluded that there may be a conflict of interest between the Indemnifying Party and the Indemnified Party in the defense of such action, in each of which cases the Indemnifying Party shall pay the reasonable fees and expenses of one law firm serving as counsel for the Indemnified Party, which law firm shall be subject to approval, not to be unreasonably withheld, by the Indemnifying Party);

(b) The failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations under this Agreement to the extent that the failure to give notice did not result in harm to the Indemnifying Party;

 (c) No Indemnifying Party, in the defense of any such claim or litigation, shall, except with the approval of each Indemnified Party which approval shall not be unreasonably withheld, consent to entry of any judgment or enter into any settlement which (i) would result in injunctive or other relief being imposed against the Indemnified Party; or (ii) does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect to such claim or litigation. The Indemnified Party shall have no right to settle or compromise any such claim or litigation without the Indemnifying Party's prior written consent; and

(d) Each Indemnified Party shall furnish such information regarding itself or the claim in question as an Indemnifying Party may reasonably request in writing and shall be reasonably required in connection with the defense of such claim and litigation resulting therefrom.

14.4 Insurance.

Each party shall maintain and keep in force for the term of this Agreement comprehensive general liability insurance including Products/Completed Operations, Contractual and Broad Form Property Damage covering its indemnification obligations hereunder with a minimum limit of
[**********
**********]It is understood that such insurance shall not be construed to limit a party's liability with respect to such indemnification obligations. Such insurance shall be placed with a first class insurance carrier with at least a BBB rating by Standard & Poor. Promptly after execution and delivery of this Agreement, each party shall furnish a certificate of insurance to the other party evidencing the foregoing endorsements, coverage and limits, and providing that such insurance shall not expire or be canceled or modified without at least thirty (30) days prior notice to the other party.

ARTICLE XV -- MISCELLANEOUS PROVISIONS

15.1 Waiver.

No provision of the Agreement may be waived except in writing by both parties hereto. No failure or delay by either party hereto in exercising any right or remedy hereunder or under applicable law will operate as a waiver thereof, or a waiver of that or any other right or remedy on any subsequent occasion.

15.2 Force Majeure.

Neither party will be in breach hereof by reason of its delay in the performance of or failure to perform any of its obligations hereunder, if that delay or failure is caused by strikes, acts of God or the public enemy, riots, incendiaries, interference by civil or military authorities, or

 any similar cause beyond its control and without its fault or negligence; provided, however, the party claiming force majeure shall promptly notify the other party of the existence of such force majeure, shall use its best efforts to avoid or remedy such force majeure and shall continue performance

hereunder with the utmost dispatch whenever such force majeure is avoided or remedied. Notwithstanding the foregoing, in the event that VERTEX provides notice of force majeure to SERONO, SERONO shall have the right not to make any future payments otherwise payable hereunder until such time as VERTEX resumes performance hereunder, and the schedule for payments hereunder shall be revised to apply any payments already made in advance by SERONO for the performance so delayed or suspended by VERTEX hereunder to such performance once it is resumed or to refund any such payments to SERONO in the event that such performance is not for any reason resumed.

15.3 Registration of License.

SERONO may, at its expense, register the license granted under this Agreement in any country where the use, sale, importation, offer to sell or manufacture of a Drug Product in such country would be covered by a Valid Patent Claim. Upon request by SERONO, VERTEX agrees promptly to execute any "short form" licenses submitted to it by SERONO in order to effect the foregoing registration in such country, but such licenses shall in no way alter or affect the obligations of the parties hereunder.

15.4 Severability.

Should one or more provisions of this Agreement be or become invalid, then the parties hereto shall attempt to agree upon valid provisions in substitution for the invalid provisions, which in their economic effect come so close to the invalid provisions that it can be reasonably assumed that the parties would have accepted this Agreement with those new provisions. If the parties are unable to agree on such valid provisions, the invalidity of such one or more provisions of this Agreement shall nevertheless not affect the validity of the Agreement as a whole, unless the invalid provisions are of such essential importance to this Agreement that it may be reasonably presumed that the parties would not have entered into this Agreement without the invalid provisions

15.5 Government Acts.

In the event that any act, regulation, directive, or law of a country or its government, including its departments, agencies or courts, should make impossible or prohibit, restrain, modify or limit any material act or obligation of SERONO or VERTEX under this Agreement, the party, if any, not so affected, shall have the right, at its option, to suspend or terminate this Agreement as to such country, if good faith negotiations between the parties to

 make such modifications therein as may be necessary to fairly address the impact thereof are not successful after a reasonable period of time in producing mutually acceptable modifications to this Agreement.

15.6 Government Approvals.

Each party will obtain any government approval required in its country of domicile, or under any treaties or international agreements to which its country of domicile is a signatory, to enable this Agreement to become effective, or to enable any payment hereunder to be made, or any other obligation hereunder to be observed or performed. Each party will keep the other informed of progress in obtaining any such government approval, and will cooperate with the other party in any such efforts.

15.7 Assignment; Successors and Assigns.

This Agreement may not be assigned or otherwise transferred by either party without the prior written consent of the other party; provided, however, that either party may assign this Agreement, without the consent of the other party, (i) to any of its Affiliates, if the assigning party guarantees the full performance of its Affiliates' obligations hereunder, or (ii) in connection with the transfer or sale of all or substantially all of its assets or business or in the event of its merger or consolidation with another company. Any purported assignment in contravention of this Section 15.7 shall, at the option of the nonassigning party, be null and void and of no effect. No assignment shall release either party from responsibility for the performance of any of its accrued obligations hereunder. This Agreement shall be binding upon and enforceable against the successor to or any permitted assignee of either of the parties hereto.

15.8 Export Controls.

This Agreement is made subject to any restrictions concerning the export of materials and Technology from the United States which may be imposed upon either party to this Agreement from time to time by the United States Government. In the event any such restrictions are imposed after the Effective Date and thereby render any provisions of this Agreement invalid or unenforceable, the provisions of Section 15.4 of this Agreement shall be applicable to those provisions. SERONO will not export, directly or indirectly, any VERTEX Technology or any Bulk Drug Substance, Drug Product Candidates or Drug Products utilizing such Technology to any countries for which the United States Government or any agency thereof at the time of such export requires an export license or other

governmental approval, without first obtaining the written consent to do so from the Department of Commerce or other applicable agency of the United States Government in accordance with the applicable statute or regulation.

License, Development and Commercialization Agreement -- Confidential -- Page 44 15.9 Affiliates.

Each party may perform its obligations hereunder personally or through one or more Affiliates, although each party shall nonetheless be solely responsible for the performance of its Affiliates. Neither party shall permit any of its Affiliates to commit any act (including any act of omission) which such party is prohibited hereunder from committing directly.

15.10 Counterparts.

This Agreement may be signed in any number of counterparts with the same effect as if the signatures to each counterpart were upon a single instrument, and all such counterparts together shall constitute the same agreement.

15.11 No Agency.

Nothing herein contained shall be deemed to create an agency, joint venture, amalgamation, partnership or similar relationship between SERONO and VERTEX. Notwithstanding any of the provisions of this Agreement, neither party shall at any time enter into, incur, or hold itself out to third parties as having authority to enter into or incur, on behalf of the other party, any commitment, expense, or liability whatsoever, and all contracts, expenses and liabilities in connection with or relating to the obligations of each party under this Agreement shall be made, undertaken, incurred or paid exclusively by that party on its own behalf, and not as an agent or representative of the other party.

15.12 Notice.

All communications between the parties with respect to any of the provisions of this Agreement will be sent to the addresses set out below, or to other addresses as designated by one party to the other by notice pursuant hereto, by air courier (which shall be deemed received by the other party on the third (3rd) business day following deposit with the air courier company), or by facsimile transmission, or other electronic means of communication (which shall be deemed received when transmitted), with confirmation by air courier, sent by the close of business on or before the next following business day:

License, Development and Commercialization Agreement -- Confidential -- Page 45

If to SERONO, at:

Laboratoires Serono S.A.
Zone Industrielle de l'Ouriettaz

1170 Aubonne
Switzerland
Fax: 41-22-354-5020
Attention: General Manager

with a copy to:

Serono International S.A.
15 bis Chemin des Mines

1202 Geneva
Switzerland
Fax: 41-22-739-3070
Attention: General Counsel

and

if to VERTEX, at:

Vertex Pharmaceutical Incorporated
130 Waverly Street
Cambridge, MA U.S.A. 02139-4211

Fax: (617) 577-6680
Attention: Chief Executive Officer

with a copy to:

Kirkpatrick & Lockhart LLP 75 State Street
Boston, MA U.S.A. 02109 Fax: (617) 951-9151
Attention: Kenneth S. Boger, Esq.

15.13 Headings.

The section and paragraph headings are for convenience of reference only and will not be deemed to affect in any way the language of the provisions to which they refer.

15.14 Entire Agreement.

This Agreement, including the Schedules appended hereto, contains the entire understanding of the parties relating to the matters referred to herein, except as matters referenced herein are also addressed in the Research Agreement, and may only be amended by a written document referencing this Agreement, duly executed on behalf of the respective parties.

[Signature Page Follows]

License, Development and Commercialization Agreement -- Confidential -- Page 46 IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed and delivered by their duly authorized representatives as of the day and year first above written.

VERTEX PHARMACEUTICALS INCORPORATED

By:

Title:

LABORATOIRES SERONO S.A.

By:

Title:

By:

Title:

License, Development and Commercialization Agreement -- Confidential -- Page 47

Schedule 1.4

[**********]

[**********
**********].

License, Development and Commercialization Agreement -- Confidential
Schedule 1.11

Drug Product Candidate

To be supplied

License, Development and Commercialization Agreement -- Confidential
Schedule 1.40

SERONO Patents

Schedule 1.16

Countries of the Far East

Brunei

Burma (Myanmar)

Cambodia (Kampuchea)

Indonesia

Japan

Laos

Malaysia

Mongolia

Philippines

Singapore

Thailand

Vietnam

Korea (South and North)

Taiwan

People's Republic of China

Schedule 1.47

VERTEX Patents

License, Development and Commercialization Agreement -- Confidential

Exhibit 23

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in the Registration Statements on Forms S-8 (File Nos. 33-48030, 33-48348, 33-65742, 33-93224, 33-12325, 333-27011, 333-56179 and 333-79549) and Forms S-3 (File Nos. 333-37794 and 333-49844) of Vertex Pharmaceuticals Incorporated of our report dated February 22, 2001, relating to the consoldiated financial statements included in this Annual Report on Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
March 23, 2001

End of Filing