Table of Contents

As filed with the Securities and Exchange Commission on February 17, 2004

Registration No. 333-109653

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 2
TO
FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

XCYTE THERAPIES, INC.

(Exact name of Registrant as specified in its charter)

Delaware	2834	91-1707622
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

1124 Columbia Street, Suite 130
Seattle, Washington 98104
(206) 262-6200
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Ronald J. Berenson, M.D.
President and Chief Executive Officer
Xcyte Therapies, Inc.
1124 Columbia Street, Suite 130
Seattle, Washington 98104
(206) 262-6200
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Sonya F. Erickson	Joanna S. Black	Laura A. Berezin
Heller Ehrman White & McAuliffe LLP	General Counsel & Vice President	Cooley Godward LLP
701 Fifth Avenue, Suite 6100	Xcyte Therapies, Inc.	Five Palo Alto Square
Seattle, Washington 98104	1124 Columbia Street, Suite 130	3000 El Camino Real
(206) 447-0900	Seattle, Washington 98104	Palo Alto, CA 94306-2155
	(206) 262-6200	(650) 843-5000

Approximate date of commencement of proposed sale to the public: As soon as practicable after the Registration Statement becomes effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐ _____

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐ _____

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐ _____

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. ☐

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

This information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

Subject to completion, dated February 17, 2004

PRELIMINARY PROSPECTUS

4,000,000 Shares

XCYTE THERAPIES, INC.

Common Stock

$ per share

- Issuer Xcyte Therapies Inc. is offering 4,000,000 shares.
- We anticipate that the initial public offering price will be between $13.00 and $15.00 per share.
- This is our initial public offering and no public market currently exists for our shares.
- Proposed trading symbol: Nasdaq National Market — XCYT

This investment involves risk. See " Risk Factors" beginning on page 9.

	Per Share	Total
Public offering price	$	$
Underwriting discount	$	$
Proceeds, before expenses, to Xcyte Therapies, Inc.	$	$

The underwriters have a 30-day option to purchase up to 600,000 additional shares of common stock from us to cover over-allotments, if any.

Neither the Securities and Exchange Commission nor any state securities commission has approved of anyone's investment in these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Piper Jaffray **RBC Capital Markets**

Wells Fargo Securities, LLC **JMP Securities**

The date of this prospectus is .

TABLE OF CONTENTS

You should rely only on the information contained in this prospectus. We have not, and the underwriters have not, authorized any other person to provide you with different information. This prospectus is not an offer to sell, nor is it seeking an offer to buy, these securities in any state where the offer or sale is not permitted. The information in this prospectus is complete and accurate as of the date on the front cover, but the information may have changed since that date.

Through and including , 2004, federal securities laws may require all dealers that effect transactions in our common stock, whether or not participating in this offering, to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PROSPECTUS SUMMARY

This summary highlights selected information appearing elsewhere in this prospectus. While this summary highlights what we consider to be the most important information about us, you should carefully read this prospectus and the registration statement of which this prospectus is a part in their entirety before making an investment decision, especially the risks of investing in our common stock, which we discuss under "Risk factors" beginning on page 9, and our financial statements and related notes beginning on page F-1.

Unless the context requires otherwise, the words "Xcyte," "we," "company," "us" and "our" refer to Xcyte Therapies, Inc.

Our Business

We are a biotechnology company developing a new class of therapeutic products designed to enhance the body's natural immune responses to treat cancer, infectious diseases and other medical conditions associated with weakened immune systems. We derive our therapeutic products from a patient's own T cells, which are cells of the immune system that orchestrate immune responses and can detect and eliminate cancer cells and infected cells in the body. We use our patented and proprietary Xcellerate Technology to generate activated T cells, which we call Xcellerated T Cells, from blood that is collected from the patient. Activated T cells are T cells that have been stimulated to carry out immune functions. Our Xcellerate Technology is designed to rapidly activate and expand the patient's T cells outside of the body. These Xcellerated T Cells are then administered to the patient.

We believe, based on clinical trials to date, that our Xcellerate Technology can produce Xcellerated T Cells in sufficient numbers to generate rapid and potent immune responses to treat a variety of medical conditions. In our ongoing clinical studies using our Xcellerate Technology, we have observed an increase in the quantity and a restoration of the diversity of T cells in patients with weakened immune systems. We plan to submit these findings to the FDA for review in our annual report. We believe we can efficiently manufacture Xcellerated T Cells for therapeutic applications. We expect Xcellerated T Cells may be used alone or in combination with other complementary treatments. We and other clinical investigators have completed or are conducting clinical trials in the following indications:

- ***Chronic lymphocytic leukemia, or CLL.*** In our ongoing Phase I/II clinical trial in CLL, treatment with Xcellerated T Cells resulted in a 50% to 100% reduction in the size of enlarged lymph nodes in 10 of 11 patients evaluated to date. In addition, there was a 50% or greater reduction in spleen size as measured below the rib cage by physical examination in all 10 of the patients with enlarged spleens. We plan to submit these findings to the FDA for review in our annual report.
- ***Multiple myeloma.*** In our ongoing Phase I/II clinical trial, we have shown that treatment with Xcellerated T Cells led to rapid recovery of T cells and lymphocytes in all 32 patients evaluated to date with multiple myeloma following treatment with high-dose chemotherapy and transplantation with the patient's own stem cells, known as autologous stem cell transplantation. Previous independent clinical studies have demonstrated a correlation between patient survival and the speed of recovery of lymphocytes following treatment with chemotherapy and stem cell transplantation. Preliminary results on the first 25 patients evaluated for tumor responses in our clinical trial have documented, in the majority of patients, a greater than 90% decrease in the tumor marker, which is used to measure disease. Additional follow-up will be required to determine the therapeutic effects of Xcellerated T Cells after transplant. In independent clinical trials, a greater than

90% decrease in the tumor marker has been associated with increased survival in multiple myeloma patients. We have also recently initiated a Phase II trial to treat patients who have advanced disease with Xcellerated T Cells without other anti-tumor therapy.

- ***Non-Hodgkin's lymphoma.*** In an independent clinical trial, conducted by one of our scientific founders under a physician-sponsored investigational new drug application, or IND, 16 non-Hodgkin's lymphoma patients undergoing high-dose chemotherapy and autologous stem cell transplantation were treated with T cells activated with an earlier version of our proprietary technology. Based on a recent report of the results of this trial in a peer-reviewed journal, 8 out of these 16 patients with a very poor prognosis were still alive with a median followup of 33 months. We plan to initiate a Phase II clinical trial in the first half of 2004 in patients with non-Hodgkin's lymphoma who have failed prior therapies.
- ***Kidney cancer.*** In our completed Phase I clinical trial in 25 patients with metastatic kidney cancer, treatment with Xcellerated T Cells and low doses of the T cell activating agent, interleukin-2, or IL-2, led to a median survival of 21 months. The results of this study were recently published in a peer-reviewed journal. Previous independent clinical studies have demonstrated median survival of patients with metastatic kidney cancer of approximately 12 months.
- ***Prostate cancer.*** In our recently completed Phase I/II clinical trial in prostate cancer, treatment with Xcellerated T Cells led to greater than 50% decreases in the serum tumor marker, prostate specific antigen, or PSA, in 2 out of 19 patients. In some independent clinical studies, decreases in PSA levels have been shown to correlate with increased patient survival.
- ***HIV.*** In an independent clinical trial in HIV patients with low T cell counts, conducted by one of our scientific founders under a physician-sponsored IND, treatment with T cells activated using an earlier version of our proprietary technology increased the patient population's average T cell count to within normal levels and maintained this normal count for at least one year following therapy. The results of this study were recently published in a peer-reviewed journal. In several independent clinical studies, increased levels of T cells have been shown to correlate with increased patient survival and improved clinical outcome. In addition, Fresenius Biotechnology GmbH initiated a Phase I clinical trial under our collaboration to treat HIV patients with genetically-modified T cells produced using our Xcellerate Technology.

Our Solution

We have developed our proprietary Xcellerate Technology, which consistently activates and grows large numbers of T cells *ex vivo*, or outside of the body, for multiple potential therapeutic applications.

Benefits of Xcellerated T Cells

We believe Xcellerated T Cells may be an effective treatment for cancer and infectious diseases and may have the following clinical benefits:

- ***Increased T cell quantity.*** Using our Xcellerate Technology, we have documented a 100-fold to 300-fold increase in T cells during the manufacturing process. These results were published in the peer-reviewed *BioProcessing Journal* in November 2003.

- ***Prolonged T cell survival.*** In an independent clinical trial, T cells activated using an earlier version of our proprietary technology have been documented to survive in the body for more than a year after their administration. We believe the prolonged survival of Xcellerated T Cells may enable less frequent administration than existing therapeutic products for cancer and infectious diseases.
- ***Improved T cell quality.*** Xcellerated T Cells have been documented to produce a broad spectrum of chemical messengers, including cytokines and other molecules required to generate an effective immune response.
- ***Broadened T cell diversity.*** We have observed the generation of T cells with a broad diversity of T cell receptors using our Xcellerate Technology. A broad diversity of T cell receptors is important to enable the immune system to recognize and eliminate a wide variety of cancers and infectious diseases.
- ***Favorable side effect profile.*** There have been over 115 infusions of Xcellerated T Cells given to more than 90 patients to date in Xcyte-sponsored clinical trials. We have observed few side effects in most patients. Side effects have generally been minor, consisting primarily of fever, chills and nausea associated with the infusions. To date we have had only two serious adverse events that were judged as possibly or probably related to our technology, both of which resolved following treatment.
- ***Complementary to other therapies.*** We believe that Xcellerated T Cells may be complementary to current therapies, such as chemotherapy, radiation and monoclonal antibodies.

Benefits of our Xcellerate Technology

We believe our Xcellerate Technology may have the following benefits:

- ***Ex vivo process.*** We designed our Xcellerate Technology to be used outside of the body in a controlled environment where we can provide optimal conditions for the activation and growth of T cells.
- ***Broad clinical applications.*** Based on recent clinical trials, we believe that our Xcellerate Technology can be applied to a variety of medical conditions, including many types of cancer and infectious diseases.
- ***Ease of administration.*** Xcellerated T Cells are administered in approximately two hours using a routine intravenous procedure in an outpatient clinic.
- ***Reproducible and cost-effective manufacturing.*** We use a standardized process to produce Xcellerated T Cells for all patients. Other than our proprietary components, our Xcellerate Technology incorporates commercially available products and standard clinical and blood bank supplies, which enables us to efficiently manufacture Xcellerated T Cells.

Our Strategy

Our goal is to be a leader in the field of T cell therapy and to leverage our expertise in T cell activation to develop and commercialize products to treat patients with cancer, infectious diseases and other medical conditions associated with weakened immune systems. We plan to initially develop Xcellerated T Cells to treat life-threatening diseases, such as cancer and HIV, which currently have inadequate treatments. Key elements of our strategy include the following:

- ***Maximize speed to market.***
- ***Expand the therapeutic applications of Xcellerated T Cells.***
- ***Leverage complementary technologies and therapies.***
- ***Retain selected U.S. commercialization rights in cancer.***
- ***Enhance our manufacturing capabilities.***
- ***Expand and enhance our intellectual property.***

Risks Associated With Our Business

We are a development stage company. We are subject to numerous risks and obstacles and we have highlighted the most important of them in “Risk factors” beginning on page 9. In particular, we have a limited operating history and have incurred losses in each fiscal year since our inception. We incurred net losses of approximately $18.5 million for the year ended December 31, 2003, and our deficit accumulated during the development stage was approximately $86.6 million as of December 31, 2003. We have no commercial products for sale, and we anticipate that we will incur substantial and increasing losses over the next several years as we expand our research, development and clinical trial activities, acquire or license technologies, scale up and improve our manufacturing operations, seek regulatory approval and, if we receive FDA approval, commercialize our products. Because of the numerous risks and uncertainties associated with our product development efforts, we are unable to predict whether or when we will achieve profitability.

Our Corporate Information

We were incorporated in Delaware as MolecuRx, Inc. in January 1996. We changed our name to CDR Therapeutics, Inc. in August 1996 and changed our name to Xcyte Therapies, Inc. in October 1997. Our principal executive offices are located at 1124 Columbia Street, Suite 130, Seattle, Washington 98104, and our telephone number is (206) 262-6200. Our web site address is *www.xcytetherapies.com*. The information contained on our web site is not incorporated by reference into and does not form any part of this prospectus.

THE OFFERING

Common stock we are offering	4,000,000 shares
Common stock to be outstanding after the offering	14,606,098 shares
Offering price	$ per share
Use of proceeds	We expect to use the net proceeds from this offering to fund clinical trial activities, manufacturing and preclinical research and development activities and for other general corporate purposes, including capital expenditures, complementary technology acquisition and working capital to fund anticipated operating losses. See “Use of proceeds.”
Proposed Nasdaq National Market symbol	XCYT

The number of shares of our common stock outstanding after this offering is based on 10,606,098 shares of our common stock outstanding as of January 31, 2004, after giving effect to:

- the conversion of all 6,781,814 shares of our preferred stock outstanding as of January 31, 2004 into 6,781,814 shares of our common stock, which will become effective at the closing of this offering;
- the net exercise of warrants outstanding as of January 31, 2004, which will expire at the closing of this offering, to purchase 907,317 shares of our common stock at a weighted average exercise price of $0.30 per share, resulting in the issuance of 888,139 shares of common stock, assuming an initial public offering price of $14 per share;
- the conversion of shares of our preferred stock issuable upon the net exercise of warrants outstanding as of January 31, 2004, which will expire at the closing of this offering, to purchase 86,727 shares of our preferred stock at a weighted average exercise price of $7.36 per share, resulting in the issuance of 42,750 shares of common stock, assuming an initial public offering price of $14 per share; and
- the conversion of convertible promissory notes issued in October 2003 for net proceeds of approximately $12.7 million, into approximately 1,346,771 shares of our common stock, which includes the conversion of approximately $242,000 in accrued interest as of January 31, 2004.

The number of shares of our common stock outstanding immediately after this offering excludes:

- 46,607 shares of our common stock issuable upon the exercise of warrants outstanding as of January 31, 2004 at a weighted average exercise price of $7.94 per share;
- 798,068 shares of our common stock issuable upon the exercise of stock options outstanding as of January 31, 2004 under our 1996 Stock Option Plan at a weighted average exercise price of $4.58 per share;
- 198,238 shares of our common stock reserved for future issuance under our 1996 Stock Option Plan; and

- 636,363 shares of our common stock reserved for future issuance under our 2003 Stock Plan, 109,090 shares of our common stock reserved for future issuance under our 2003 Employee Stock Purchase Plan and 90,909 shares of our common stock reserved for future issuance under our 2003 Directors' Stock Option Plan, as of January 31, 2004.

Unless otherwise indicated, all information in this prospectus assumes the following:

- a 2 for 11 reverse split of our common stock to be completed before the closing of this offering; and
- the underwriters do not exercise their option to purchase up to 600,000 additional shares of our common stock to cover over-allotments, if any.

SUMMARY FINANCIAL DATA

The following summary financial data for the years ended December 31, 1999 through 2003 have been derived from our audited financial statements. This information is only a summary and should be read together with the financial statements and the notes to those statements appearing elsewhere in this prospectus and the information under "Selected financial data" and "Management's discussion and analysis of financial condition and results of operations."

	Years ended December 31,				
	1999	2000	2001	2002	2003
	(in thousands, except per share data)				
Statement of Operations Data					
Total revenue	$ 16	$ 98	$ 30	$ —	$ 170
Operating expenses:					
Research and development	5,471	11,257	14,701	14,663	13,685
General and administrative	1,654	2,403	5,204	4,979	4,322
Total operating expenses	7,125	13,660	19,905	19,642	18,007
Loss from operations	(7,109)	(13,562)	(19,875)	(19,642)	(17,837)
Other income (expense), net	162	621	363	189	(620)
Net loss	(6,947)	(12,941)	(19,512)	(19,453)	(18,457)
Accretion of preferred stock	—	—	(8,411)	(8,001)	—
Net loss applicable to common stockholders	$ (6,947)	$ (12,941)	$ (27,923)	$ (27,454)	$ (18,457)
Basic and diluted net loss per common share	$ (6.32)	$ (11.86)	$ (22.14)	$ (19.40)	$ (12.40)
Shares used in basic and diluted net loss per share calculation	1,100	1,091	1,261	1,420	1,488
Pro forma basic and diluted net loss per common share (unaudited)[1]					$ (2.10)
Shares used in pro forma basic and diluted net loss per common share calculation (unaudited)[1]					8,570

[1] The pro forma basic and diluted net loss per share reflects the weighted effect of the assumed conversion of redeemable convertible preferred stock and convertible promissory notes into common stock. See note 12 to our financial statements for information regarding computation of basic and diluted net loss per share and pro forma basic and diluted net loss per share.

The following table contains a summary of our balance sheet as of December 31, 2003:

- on an actual basis;
- on a pro forma as adjusted basis to further reflect:
  - the sale of 4,000,000 shares of our common stock we are offering at an assumed initial public offering price of $14 per share, after deducting underwriting discounts and commissions and estimated offering expenses to be paid by us;
  - the conversion of all 6,781,814 shares of our preferred stock outstanding as of December 31, 2003 into 6,781,814 shares of our common stock, which will become effective at the closing of this offering;
  - the net exercise of warrants outstanding as of December 31, 2003, which will expire at the closing of this offering, to purchase 907,317 shares of our common stock at a weighted average exercise price of $0.30 per share, resulting in the issuance of 888,139 shares of common stock, assuming an initial public offering price of $14 per share;
  - the conversion of shares of our preferred stock issuable upon the net exercise of warrants outstanding as of December 31, 2003, which will expire at the closing of this offering, to purchase 86,727 shares of our preferred stock at a weighted average exercise price of $7.36 per share, resulting in the issuance of 42,750 shares of common stock, assuming an initial public offering price of $14 per share;
  - the conversion of warrants outstanding as of December 31, 2003 to purchase 46,607 shares of our preferred stock into warrants to purchase 46,607 shares of our common stock, which will become effective at the closing of this offering; and
  - the conversion of the convertible promissory notes we issued in October 2003 for net proceeds of approximately $12.7 million into approximately 1,339,943 shares of our common stock, which includes the conversion of approximately $177,000 in accrued interest as of December 31, 2003 and the recognition of approximately $12.4 million in interest expense associated with the discount on the notes, which will become effective upon the closing of this offering.

	As of December 31, 2003	
	Actual	Pro forma as adjusted
	(unaudited, in thousands)	
Balance Sheet Data		
Cash, cash equivalents and short-term investments	$ 13,540	$ 64,420
Working capital	(653)	62,056
Total assets	18,498	69,378
Long-term obligations, less current portion	1,555	1,555
Redeemable convertible preferred stock	64,604	—
Redeemable convertible preferred stock warrants	2,467	—
Total stockholders' equity (deficit)	(64,840)	64,940

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below with all of the other information included in this prospectus before deciding to invest in our common stock. If any of the following risks actually occur, they may materially harm our business and our financial condition and results of operations. In this event, the market price of our common stock could decline and you could lose part or all of your investment. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business.

Risks Related To Our Business

We expect to continue to incur substantial losses, and we may never achieve profitability.

We are a development stage company with limited operating history. We have incurred significant operating losses since we began operations in 1996, including net losses of approximately $18.5 million for the year ended December 31, 2003, and we may never become profitable. As of December 31, 2003, we had a deficit accumulated during the development stage of approximately $86.6 million. These losses have resulted principally from costs incurred in our research and development programs and from our general and administrative expenses. We also expect to incur significant costs to renovate our leased facility for the manufacture of Xcellerated T Cells for our planned clinical trials and, if we receive FDA approval, for initial commercialization activities. To date, we have derived no revenues from product sales or royalties. We do not expect to have any significant product sales or royalty revenue for a number of years. Our operating losses have been increasing during the past several years and will continue to increase significantly in the next several years as we expand our research and development, participate in clinical trial activities, acquire or license technologies, scale up and improve our manufacturing operations, seek regulatory approvals and, if we receive FDA approval, commercialize our products. These losses, among other things, have had and will continue to have an adverse effect on our stockholders' equity and working capital. Because of the numerous risks and uncertainties associated with our product development efforts, we are unable to predict when we may become profitable, if at all. If we are unable to achieve and then maintain profitability, the market value of our common stock will likely decline.

We will need to raise substantial additional capital to fund our operations, and our failure to obtain funding when needed may force us to delay, reduce or eliminate our product development programs or collaboration efforts.

Developing products and conducting clinical trials for the treatment of cancer and infectious diseases require substantial amounts of capital. To date, we have raised capital primarily through private equity financings and equipment leases. If we are unable to timely obtain additional funding, we may never conduct required clinical trials to demonstrate safety and clinical efficacy of Xcellerated T Cells, and we may never obtain FDA approval or commercialize any of our products. We will need to raise additional capital to, among other things:

- fund our clinical trials;
- expand our research and development activities;
- scale up and improve our manufacturing operations;
- finance our general and administrative expenses;
- acquire or license technologies;
- prepare, file, prosecute, maintain, enforce and defend our patent and other proprietary rights;
- pursue regulatory approval and commercialization of Xcellerated T Cells and any other products that we may develop; and
- develop and implement sales, marketing and distribution capabilities.

Our net cash used in operations has exceeded our cash generated from operations for each year since our inception. For example, we used approximately $15.5 million in operating activities for the year ended December 31, 2003 and approximately $15.2 million in 2002. Based on the current status of our product development and collaboration plans, we believe that the net proceeds from this offering, together with our cash, cash equivalents and investments, will be adequate to satisfy our capital needs through at least the end of the second quarter of 2005. However, changes in our business may occur that would consume available capital resources sooner than we expect. As of December 31, 2003, we had cash, cash equivalents and short-term investments of approximately $13.5 million and current liabilities of approximately $14.7 million. In October 2003, we issued convertible notes for net proceeds of approximately $12.7 million. Based on our current financial resources and anticipated expenses and in the event we do not raise any capital from this offering, we believe we have sufficient funding to continue our operations through at least the end of October 2004, unless a majority of the holders of the notes elect to accelerate the maturity date on or after April 30, 2004. These convertible promissory notes have an aggregate principal amount of $12.7 million and interest accrues annually at a rate of six percent. These convertible promissory notes convert into shares of our common stock at the closing of this offering. Additionally, holders of our preferred stock may redeem their shares at any time for an aggregate redemption price of approximately $76.5 million based on shares of Preferred Stock outstanding as of December 31, 2003. The holders of our preferred stock will not have the right to force us to redeem their shares after their shares convert into shares of our common stock, which will occur upon completion of our initial public offering. Our future funding requirements will depend on many factors, including, among other things:

- the progress, expansion and cost of our clinical trials and research and development activities;
- any future decisions we may make about the scope and prioritization of the programs we pursue;
- the development of new product candidates or uses for our Xcellerate Technology;
- changes in regulatory policies or laws that affect our operations; and
- competing technological and market developments.

If we raise additional funds by issuing equity securities, further dilution to stockholders may result and new investors could have rights superior to holders of the shares issued in this offering. In addition, debt financing, if available, may include restrictive covenants. If adequate funds are not available to us, we may have to liquidate some or all of our assets or delay, reduce the scope of or eliminate some portion or all of our development programs or clinical trials. We also may have to license to other companies our products or technologies that we would prefer to develop and commercialize ourselves.

We may decide to pursue development programs for Xcellerated T Cells that may never receive regulatory approval or prove to be profitable.

Because we have limited resources and access to capital to fund our operations, our management must make significant prioritization decisions on which programs to pursue and how much of our resources to allocate to each program. We are currently focusing our research and development efforts on the use of Xcellerated T Cells to treat CLL, multiple myeloma, non-Hodgkin’s lymphoma, kidney cancer, prostate cancer and HIV. Our management has broad discretion to suspend, scale down or discontinue any of these programs or to initiate new programs to treat other clinical indications. Xcellerated T Cells may never prove to be safe and clinically effective to treat any of these indications, and the market for these indications may never prove to be profitable even if we obtain regulatory approval for these indications. Accordingly, we cannot assure you that the programs we decide to pursue will lead to regulatory approval or will prove to be profitable.

The clinical and commercial utility of our Xcellerate Technology is uncertain and may never be realized.

Our Xcellerate Technology is based on a novel approach to treat cancer and infectious diseases and is in an early stage of development.

Our clinical trials to date have involved small numbers of patients, which were not designed to produce statistically significant results as to efficacy. In addition, these trials have not been randomized and double-blinded to ensure the results are due to the effect of Xcellerate Technology. Some of the data regarding our Xcellerate Technology were derived from independent clinical trials, including physician-sponsored trials, which we do not control. In addition, data from these independent clinical trials were derived using T cells activated with an earlier version of our proprietary technology. Success in early clinical trials does not ensure that large-scale trials will be successful nor does it predict final results. Acceptable results in early trials may not be repeated in later trials. In addition, we may not be able to treat patients if we cannot collect a sufficient quantity of T cells that meet our minimum specifications to enable us to produce Xcellerated T Cells. Also, some patients may be unable to tolerate the required procedures for blood collection and administration of Xcellerated T Cells.

Although we have observed few serious side effects in patients infused with Xcellerated T Cells in clinical trials conducted to date, we may not ultimately be able to provide the FDA with satisfactory data to support a claim of clinical safety and efficacy sufficient to enable the FDA to approve Xcellerated T Cells for commercialization. This may be because later clinical trials may fail to reproduce favorable data we may have obtained in earlier clinical trials, because the FDA may disagree with how we interpret the data from these clinical trials or because the FDA may not accept these therapeutic effects as valid endpoints in pivotal trials necessary for market approval. For example, although to date our studies have indicated that our Xcellerate Technology can lead to increased T cell and lymphocyte counts, the FDA will not accept increased T cell and lymphocyte counts as a valid endpoint in pivotal studies necessary for market approval. Instead, we would be required to show that Xcellerated T Cells lead to a significant clinical benefit. We will also need to demonstrate that Xcellerated T Cells are safe. We do not have data on possible harmful long-term effects of Xcellerated T Cells and will not have any data on long-term effects in the near future. We also have limited data on the safety and efficacy of Xcellerated T Cells to treat patients with very weakened immune systems, such as patients with HIV. For these and other reasons, the clinical effectiveness and commercialibility of our Xcellerate Technology is uncertain and may never be realized.

We may fail to obtain or may experience delays in obtaining regulatory approval to market Xcellerated T Cells, which will significantly harm our business.

We do not have the necessary approval to market or sell Xcellerated T Cells in the United States or any foreign market. Before marketing Xcellerated T Cells, we must successfully complete extensive preclinical studies and clinical trials and rigorous regulatory approval procedures. We cannot assure you that we will obtain the necessary regulatory approval to commercialize Xcellerated T Cells.

Conducting clinical trials is uncertain and expensive and often takes many years to complete. The results from preclinical testing and early clinical trials are often not predictive of results obtained in later clinical trials. In conducting clinical trials, we may fail to establish the effectiveness of Xcellerated T Cells for the targeted indication or we may discover unforeseen side effects. Moreover, clinical trials may require the enrollment of large numbers of patients, and suitable patients may be difficult to identify and recruit. Clinical trials are also often subject to unanticipated delays. In addition, we are currently developing a custom bioreactor system in our manufacturing process, and we will not be able to obtain FDA approval to commercialize Xcellerated T Cells without the FDA's acceptance of our manufacturing process using this bioreactor system. Also, patients participating in the trials may die before completion of the trial or suffer adverse medical effects unrelated to treatment with Xcellerated T Cells. This could delay or lead to termination of our clinical trials. A number of companies in the biotechnology industry have suffered significant setbacks in every stage of clinical trials, even in advanced clinical trials after positive results in earlier trials.

To date, the FDA has approved only a few cell-based therapies for commercialization. The FDA recently formed a new division that will regulate biologic products, such as Xcellerated T Cells. The processes and requirements associated with this new division may cause delays and additional costs in obtaining regulatory approvals for our products. Because our Xcellerate Technology is novel, and cell-based therapies are relatively new, regulatory

agencies may lack experience in evaluating product candidates like Xcellerated T Cells. This inexperience may lengthen the regulatory review process, increase our development costs and delay or prevent commercialization of Xcellerated T Cells. In addition, the following factors may impede or delay our ability to obtain timely regulatory approvals, if at all:

- our limited experience in filing and pursuing the applications necessary to gain regulatory approvals;
- any failure to satisfy efficacy, safety or quality standards;
- a decision by us or regulators to suspend or terminate our clinical trials if the participating patients are being exposed to unacceptable health risks;
- regulatory inspections of our clinical trials or manufacturing facilities, which may, among other things, require us to undertake corrective action or suspend or terminate our clinical trials if investigators find us not to be in compliance with applicable regulatory requirements;
- our ability to produce sufficient quantities of Xcellerated T Cells to complete our clinical trials;
- varying interpretations of the data generated from our clinical trials; and
- changes in governmental regulations or administrative action.

Any delays in, or termination of, our clinical trials could materially and adversely affect our development and collaboration timelines, which may cause our stock price to decline. If we do not complete clinical trials for Xcellerated T Cells and obtain regulatory approvals, we may not be able to recover any of the substantial costs we have invested in the development of Xcellerated T Cells.

We have limited manufacturing experience and may not be able to manufacture Xcellerated T Cells on a large scale or in a cost-effective manner.

We currently manufacture Xcellerated T Cells for research and development and our clinical activities in one manufacturing facility in Seattle, Washington. We have not demonstrated the ability to manufacture Xcellerated T Cells beyond quantities sufficient for research and development and limited clinical activities. We have no experience manufacturing Xcellerated T Cells at the capacity that will be necessary to support large clinical trials or commercial sales. We plan to relocate our manufacturing activities to our leased property in Bothell, Washington, which we plan to renovate for the manufacture of Xcellerated T Cells for our planned clinical trials and, if we receive FDA approval, initial commercialization. However, we may encounter difficulties in obtaining the approvals for, and designing, constructing, validating and operating, any new manufacturing facility. We may also be unable to hire the qualified personnel that we will require to accommodate the expansion of our operations and manufacturing capabilities. If we relocate our manufacturing activities to a new facility during or after a pivotal clinical trial, we may be unable to obtain regulatory approval unless and until we demonstrate to the FDA similarity of the Xcellerated T Cells manufactured in the new facility to the Xcellerated T Cells manufactured in the prior facility. If we cannot adequately demonstrate similarity to the FDA, we could be required to repeat clinical trials which would be expensive and substantially delay regulatory approval.

Because our Xcellerate Technology is a patient-specific, cell-based product, the manufacture of Xcellerated T Cells is more complicated than the manufacture of most pharmaceuticals. Our present manufacturing process may not meet our initial expectations as to reproducibility, yield, purity or other measurements of performance. In addition, we have recently begun using a custom bioreactor system in our manufacturing process and only have limited manufacturing experience using this bioreactor system to activate and expand T cells. Because this new manufacturing process is unproven, we may never successfully utilize our custom bioreactor system to commercialize our products. In addition, because our prior clinical trials were conducted using a prior version of the manufacturing system, we may have to show comparability of the different versions of manufacturing systems we have used. We are currently negotiating a manufacturing and supply agreement with the manufacturer of our bioreactor system. If we are unable to negotiate this contract or are unable to procure a

suitable alternative manufacturer in a timely manner, we would face a setback in the development of our manufacturing process. For these and other reasons, we may not be able to manufacture Xcellerated T Cells on a large scale or in a cost-effective manner.

We are the only manufacturer of Xcellerated T Cells. Although we are considering third party manufacturing options, we expect that we will conduct most of our manufacturing in our own facility for the next several years. Furthermore, because we are the only manufacturer of Xcellerated T Cells and we currently use only one manufacturing facility, any damage to or destruction of our manufacturing facility or our equipment, prolonged power outage, contamination of our facility or shutdown by the FDA or other regulatory authority could significantly impair or curtail our ability to produce Xcellerated T Cells. In addition, we store our patients' cells in freezers at our manufacturing facility. If these cells are damaged at our facility, including by the loss or malfunction of these freezers or our back-up power systems, we would need to collect replacement patient cells, which would delay our patients' treatments. If we are unable to collect replacement cells from our patients, we could incur liability and our business could suffer.

The government and other third-party payors may control the pricing and profitability of our products.

Our ability to commercialize Xcellerated T Cells successfully will depend in part on the extent to which governmental authorities, private health insurers and other organizations establish appropriate reimbursement levels for the cost of Xcellerated T Cells and related treatments. Increasing emphasis on managed care in the United States will continue to put pressure on the pricing of healthcare products. In addition, governmental authorities may establish pricing and reimbursement levels for some disease indications but not others, which may reduce the demand for Xcellerated T Cells and our profitability. Pricing and profitability of healthcare products are also subject to governmental control in some foreign markets. Cost control initiatives could:

- result in lower prices for Xcellerated T Cells or any future products or their exclusion from reimbursement programs;
- reduce any future revenues we may receive from collaborators;
- discourage physicians from delivering Xcellerated T Cells to patients in connection with clinical trials or future treatments; and
- limit off-label use of Xcellerated T Cells.

We rely on third parties to conduct some of the clinical trials for Xcellerated T Cells, and their failure to timely and successfully perform their obligations to us, or their defective performance, could significantly harm our product development programs and our business.

Because we rely on academic institutions, site management organizations and clinical research organizations to conduct, supervise or monitor some or all aspects of clinical trials involving our Xcellerate Technology, we have limited control over the timing and other aspects of these clinical trials. If these third parties do not successfully carry out their duties under their agreements with us, fail to inform us if these trials fail to comply with clinical trial protocols or fail to meet expected deadlines, this may adversely affect our clinical trials and we may not be able to obtain regulatory approvals.

A third party on whom we rely to conduct clinical trials for Xcellerated T Cells could conduct those clinical trials defectively. This could lead to patients experiencing harmful side effects or could prevent us from proving that Xcellerated T Cells are effective, which may result in:

- our failure to obtain or maintain regulatory approval;
- physicians not using or recommending our products; and
- significant product liability.

Xcellerated T Cells may never achieve market acceptance even if we obtain regulatory approvals.

We do not expect to receive regulatory approvals for the commercial sale of any products derived from our Xcellerate Technology for several years, if at all. Even if we do receive regulatory approvals, the future commercial success of Xcellerated T Cells will depend, among other things, on its acceptance by physicians, patients, healthcare payors and other members of the medical community as a therapeutic and cost-effective alternative to commercially available products. Because only a few cell-based therapy products have been commercialized, we do not know to what extent cell-based immunotherapy products will be accepted as therapeutic alternatives. If we fail to gain market acceptance, we may not be able to earn sufficient revenues to continue our business. Market acceptance of and demand for any product that we may develop will depend on many factors, including:

- our ability to provide acceptable evidence of safety and efficacy;
- convenience and ease of administration;
- prevalence and severity of adverse side effects;
- availability of alternative and competing treatments;
- cost effectiveness;
- effectiveness of our marketing and distribution strategy and the pricing of any product that we may develop;
- publicity concerning our products or competitive products; and
- our ability to obtain sufficient third-party coverage or reimbursement.

If Xcellerated T Cells do not become widely accepted by physicians and patients, it is unlikely that we will ever become profitable.

Even if we obtain regulatory approvals for Xcellerated T Cells, those approvals and ongoing regulation of our products may limit how we manufacture and market our products, which could prevent us from realizing the full benefit of our efforts.

If we obtain regulatory approvals, Xcellerated T Cells, our Xcellerate Technology and our manufacturing facilities will be subject to continual review, including periodic inspections, by the FDA and other US and foreign regulatory authorities. In addition, regulatory authorities may impose significant restrictions on the indicated uses or marketing of Xcellerated T Cells or other products that we may develop. These and other factors may significantly restrict our ability to successfully commercialize Xcellerated T Cells and our Xcellerate Technology.

We and many of our vendors and suppliers are required to comply with current Good Manufacturing Practices, or cGMP, which include requirements relating to quality control and quality assurance as well as the corresponding maintenance of records and documentation. Furthermore, our manufacturing facilities must be approved by regulatory agencies before these facilities can be used to manufacture Xcellerated T Cells, and they will also be subject to additional regulatory inspections. Any material changes we may make to our manufacturing process may require approval by the FDA and state or foreign regulatory authorities. Failure to comply with FDA or other applicable regulatory requirements may result in criminal prosecution, civil penalties, recall or seizure of products, partial or total suspension of production or withdrawal of a product from the market.

We must also report adverse events that occur when our products are used. The discovery of previously unknown problems with Xcellerated T Cells or our manufacturing facilities may result in restrictions or sanctions on our products or manufacturing facilities, including withdrawal of our products from the market. Regulatory agencies may also require us to reformulate our products, conduct additional clinical trials, make changes in the labeling of our product or obtain re-approvals. This may cause our reputation in the market place to suffer or subject us to lawsuits, including class action suits.

We rely on third parties to administer Xcellerated T Cells to patients, and our business could be harmed if these third parties administer Xcellerated T Cells incorrectly.

We rely on the expertise of physicians, nurses and other associated medical personnel to administer Xcellerated T Cells to patients. Although our Xcellerate Technology employs mostly standard medical procedures, if these medical personnel are not properly trained to administer, or are negligent in the administration of, Xcellerated T Cells, the therapeutic effect of Xcellerated T Cells may be diminished or the patient may suffer critical injury.

In addition, third-party medical personnel must thaw Xcellerated T Cells received from us. If this thawing is not performed correctly, the patient may suffer critical injury. While we intend to provide training materials and adequate resources to these third-party medical personnel, the thawing of Xcellerated T Cells will occur outside our supervision and may not be administered properly. If, due to a third-party error, people believe that Xcellerated T Cells are ineffective or harmful, the desire to use Xcellerated T Cells may decline, which will negatively impact our ability to generate revenue. We may also face significant liability even though we may not be responsible for the actions of these third parties.

There are risks inherent in our business that may subject us to potential product liability suits and other claims, which may require us to engage in expensive and time-consuming litigation or pay substantial damages and may harm our reputation and reduce the demand for our product.

Our business exposes us to product liability risks, which are inherent in the testing, manufacturing, marketing and sale of biopharmaceutical products. We will face an even greater risk of product liability if we commercialize Xcellerated T Cells. An individual may bring a product liability claim against us if Xcellerated T Cells cause, or merely appear to have caused, an injury. For example, we have been named as a defendant in connection with a clinical trial using technology similar to ours conducted at the University of Chicago Hospital. This proceeding is currently pending. Because of the nature of the complaint against us, we cannot predict the probability of a favorable or unfavorable outcome or estimate the amount or range of potential loss. Insurance coverage for this claim has been denied to date under our clinical trial insurance policy. See “Business—Legal proceedings.” In addition, we are licensing our Xcellerate Technology in the field of HIV retroviral gene therapy to Fresenius under our collaboration. We may incur liability and be exposed to claims for products manufactured by Fresenius.

Certain aspects of how Xcellerated T Cells are processed and administered may enhance our exposure to liability. Our Xcellerate Technology requires us to activate a patient’s T cells *ex vivo*, or outside of the body, using blood collected from the patient. Third party physicians or other medical personnel initially collect a patient’s blood through a process called leukapheresis, which may pose risks, such as bleeding and infection. The blood that we collect from our patients may contain infectious agents that may infect medical personnel or others with whom the blood comes in contact. Medical personnel administer Xcellerated T Cells to patients intravenously in an outpatient procedure. This procedure poses risks to the patient similar to those occurring with infusions of other frozen cell products, such as stem cells, including blood clots, infection and mild to severe allergic reactions.

It is possible that we or third parties may misidentify Xcellerated T Cells and deliver them to the wrong patient. If these misidentified Xcellerated T Cells are administered to the wrong patient, the patient could suffer irreversible injury or death.

The discovery of unforeseen side effects of Xcellerated T Cells could also lead to lawsuits against us. Regardless of merit or eventual outcome, product liability or other claims may, among other things, result in:

- injury to our reputation and decreased demand for Xcellerated T Cells;
- withdrawal of clinical trial volunteers;
- costs of related litigation; and
- substantial monetary awards to plaintiffs.

We currently have clinical trial insurance that covers our clinical trials up to $5.0 million per occurrence with a $5.0 million aggregate limit, and we intend to obtain product liability coverage in the future. However, due to factors outside of our control, including the risks discussed above as well as conditions in the relevant insurance markets, we may not be able to renew or obtain such coverage on acceptable terms, if at all. Furthermore, even if we secure coverage, we may not be able to obtain policy limits adequate to satisfy any liability that may arise. If a successful product liability or other claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover these claims and our business operations could suffer.

If Xcellerated T Cells or components of our Xcellerate Technology alone or in combination with complementary treatments cause unforeseen harmful side effects, physicians may not use our products and/or we may incur significant product liability, which will adversely affect our ability to operate our business.

Xcellerated T Cells or components of our Xcellerate Technology may cause unforeseen harmful side effects. For example, a patient receiving Xcellerated T Cells could have a severe allergic reaction or could develop an autoimmune condition. While we employ procedures to substantially remove the antibodies and beads used to generate Xcellerated T Cells, it is possible that residual antibodies or beads may be infused into patients and cause harmful effects.

In addition, we have not conducted studies on the long-term effects associated with the media that we use to grow and freeze cells as part of our Xcellerate Technology. These media contain substances that have proved harmful if used in certain quantities. While we believe that we use sufficiently small quantities of these substances, harmful effects may still arise from our use of these media. As we continue to develop our Xcellerate Technology, we may encounter harmful side effects that we did not previously observe in our prior studies and clinical trials.

We believe Xcellerated T Cells may be used in combination with complementary treatments, including cancer vaccines, monoclonal antibodies, genes, cytokines or chemotherapy, and one or more of these other therapies could cause harmful side effects that could be attributed to Xcellerated T Cells. Any or all of these harmful side effects may occur at various stages of our product development, including the research stage, the development stage, the clinical stage or the commercial stage of our products. If people believe Xcellerated T Cells or any component of our Xcellerate Technology alone or in combination with complementary treatments causes harmful side effects, we may incur significant damages from product liability claims, which will adversely affect our ability to operate our business.

We rely on a limited number of manufacturers and suppliers for some of the key components of our Xcellerate Technology. The loss of these suppliers, or their failure to provide us with adequate quantities of these key components when needed, could delay our clinical trials and prevent or delay commercialization of Xcellerated T Cells.

We rely on third party suppliers for some of the key components used to manufacture Xcellerated T Cells. We rely on Lonza Biologics PLC, or Lonza, to develop and manufacture the antibodies that we use in our Xcellerate Technology. Either party may terminate our agreements with Lonza for breach or insolvency of the other party or if Lonza is unable to perform its obligations for scientific or technical reasons. Our current agreements with Lonza provide for manufacturing development and validation, and the creation and submission of materials required to obtain regulatory approval of the antibody manufacturing process. We are using the antibodies supplied by Lonza under the agreements to manufacture the Xcellerated T Cells used in our clinical trials. We are currently negotiating an agreement with Lonza to manufacture the antibodies for commercial use. If we are unable to negotiate this contract with Lonza or are unable to procure a suitable alternative manufacturer in a timely manner and on favorable terms, if at all, we may incur significant costs and be unable to continue developing our Xcellerate Technology. We are aware of few companies with the ability to manufacture commercial-grade antibodies.

Our Xcellerate Technology also depends in part on the successful attachment of the antibodies to magnetic beads. We currently use magnetic beads developed and manufactured by Dynal A.S., or Dynal, in Oslo, Norway. Dynal has the right to terminate the agreement if we do not purchase a minimum quantity of beads. Either party may terminate the agreement as of August 2009 for any reason, or earlier for the material breach or insolvency of the other party. If the agreement is not terminated by August 2009, either party can elect to extend the term of the agreement for an additional 5 years. Otherwise, it will automatically renew on a year to year basis. We are contractually obligated to obtain our beads from Dynal unless Dynal is unable to fill our orders or certain other circumstances arise. If Dynal terminates our contract or if Dynal discontinues manufacturing our beads for any reason, we may be unable to find a suitable alternative manufacturer in a timely manner, or at all, which would delay our clinical trials and delay or prevent commercialization of Xcellerated T Cells.

Our manufacturing process currently uses a commercially available tissue culture media that is available from only one manufacturer. If this manufacturer is unwilling or unable to supply us with this media, we would need to use an alternative tissue culture media, which may delay our clinical trials and harm our business. In addition, we currently use a custom bioreactor to manufacture Xcellerated T Cells that is available from only one manufacturer. If this manufacturer is unwilling or unable to manufacture or supply this custom bioreactor, we may be unable to find a suitable alternative in a timely manner, or at all, which would delay our clinical trials and delay or prevent commercialization of Xcellerated T Cells.

Although these and other suppliers have produced our components with acceptable quality, quantity and cost in the past, they may be unable or unwilling to timely meet our future demands. They may also increase the prices they charge us. Obtaining similar FDA-acceptable components from other suppliers may be difficult and expensive. If we have to switch to a replacement supplier, we could face additional regulatory delays, which could interrupt the manufacture and delivery of our product for an extended period. In addition, because Lonza and Dynal are located outside the United States, we are subject to foreign import laws and customs regulations, which complicate, and could delay, shipment of components to us and delay the development and production of Xcellerated T Cells. Any delay in the development or production of Xcellerated T Cells may impact our ability to generate revenue and cause our stock price to decline.

If we or any of our third party manufacturers do not maintain high standards of manufacturing, our ability to develop and commercialize Xcellerated T Cells could be delayed or curtailed.

We and any third parties that we may use in the future to manufacture our products must continuously adhere to cGMP regulations enforced by the FDA through its facilities inspection program. If our facilities or the facilities of these third parties do not pass a pre-approval plant inspection, the FDA will not grant market approval for Xcellerated T Cells. In complying with cGMP, we and any third-party manufacturers must expend significant time, money and effort in production, record-keeping and quality control to assure that each component of our Xcellerate Technology meets applicable specifications and other requirements. We or any of these third-party manufacturers may also be subject to comparable or more stringent regulations of foreign regulatory authorities. If we or any of our third-party manufacturers fail to comply with these requirements, we may be subject to regulatory action, which could delay or curtail our ability to develop and commercialize Xcellerated T Cells. If our component part manufacturers and suppliers fail to provide components of sufficient quality, our clinical trials or commercialization of Xcellerated T Cells could be delayed or halted and we could face product liability claims.

Our leased facilities are at risk of damage by earthquakes, and any damage to our facilities will harm our clinical trials and development programs.

We currently rely on the availability and condition of our leased Seattle, Washington facility to conduct research and development and for the manufacture of Xcellerated T Cells. This facility is located in a seismic zone, and there is the possibility of an earthquake which, depending on its magnitude, could be disruptive to our operations. Our leased facility in Bothell, Washington, where we intend to locate our initial commercial manufacturing activities, is also in a seismic area. We currently have no insurance against damage caused by earthquakes.

If third party carriers fail to ship patient samples and our products in a proper and timely manner, the treatment of patients could be delayed or prevented, our reputation may suffer and we may incur liability.

We depend on third party carriers to deliver patient-specific blood cells to us and to deliver Xcellerated T Cells back to patients in a careful and timely manner. Our Xcellerate Technology currently requires that we process each patient's leukapheresis blood sample within 48 hours of collection. Xcellerated T Cells must currently be shipped in a frozen storage shipping container and received by the patient within six days from leaving our manufacturing facility. If the shipping containers fail to maintain the necessary temperature, Xcellerated T Cells could be damaged. If third party carriers fail to timely deliver the leukapheresis blood sample to us or fail to timely ship Xcellerated T Cells to the clinic, or if they damage or contaminate them during shipment, the treatment of patients could be delayed or discontinued, our reputation may suffer and we may incur liability.

We use hazardous materials and must comply with environmental, health and safety laws and regulations, which can be expensive and restrict how we do business.

Our research and development and manufacturing processes involve the controlled storage, use and disposal of hazardous materials, including biological hazardous materials. We are subject to federal, state and local regulations governing the use, manufacture, storage, handling and disposal of materials and waste products. Although we believe that our safety procedures for handling and disposing of these hazardous materials comply with the standards prescribed by law and regulation, we cannot completely eliminate the risk of accidental contamination or injury from hazardous materials. In the event of an accident, we could be held liable for any damages that result, and any liability could exceed the limits or fall outside the coverage of our insurance. We may not be able to obtain insurance on acceptable terms, if at all. We could incur significant costs to comply with current or future environmental laws and regulations.

Our current commercial property insurance provides coverage up to $25,000 for pollution clean-up or removal and up to $25,000 for biological agency clean-up or removal. Additionally our business income coverage provides for up to $250,000 for extra expenses for pollution clean-up or removal to enable us to re-establish operations after a hazardous event.

In some circumstances we plan to rely on collaborators to commercialize Xcellerated T Cells. If our current collaborators do not perform as expected or if future collaborators do not commit adequate resources to their collaboration with us, our product development and potential for profitability may suffer.

We have entered into alliances with third-party collaborators to develop and market Xcellerated T Cells for diseases and markets that we are not pursuing on our own. In addition, our strategy includes substantial reliance on additional strategic collaborations for research, development, manufacturing, marketing and other commercialization activities relating to Xcellerated T Cells. If our collaborators do not prioritize and commit substantial resources to these collaborations, or if we are unable to secure successful future collaborations, we may be unable to commercialize Xcellerated T Cells for important diseases and in important markets, which would limit our ability to generate revenue and become profitable. Furthermore, disputes may arise between us and our existing or future collaborators, which could result in delays in the development and commercialization of Xcellerated T Cells.

For example, we have licensed our Xcellerate Technology and some related improvements, on an exclusive basis in the field of HIV retroviral gene therapy to Fresenius Biotechnology GmbH, a wholly-owned subsidiary of Fresenius AG, for research, development and commercialization in Europe, with a right of first negotiation under some circumstances to expand their territory to include North America. Our agreement with Fresenius requires us to license our Xcellerate Technology, including methods for manufacturing Xcellerated T Cells, to Fresenius. This agreement also requires us to supply all proprietary magnetic beads, or Xcyte Dynabeads, used to manufacture Xcellerated T Cells ordered by Fresenius to support its development and commercialization efforts. If we do not supply the Xcyte Dynabeads, Fresenius has the right to manufacture such Xcyte Dynabeads on its own or through a third party, until such time that we are able to supply the quantity of Xcyte Dynabeads ordered

by Fresenius. The agreement terminates upon the last to expire of the licensed patents and is subject to earlier termination by Fresenius at any time if Fresenius determines it cannot develop a commercially viable product or complete a required manufacturing audit. The agreement may be terminated by Xcyte if Fresenius does not meet certain development and commercialization milestones and by either party for the material breach or insolvency of the other party. At Fresenius' expense, we are required to expend significant resources to transfer technology to Fresenius and assist them in developing and manufacturing products using our Xcellerate Technology. Even so, Fresenius may not have sufficient resources to fund, or may decide not to proceed with, development of our Xcellerate Technology. In this event, we may terminate the Fresenius agreement, but we may not have sufficient capital resources to develop the use of Xcellerate Technology in the field of HIV retroviral gene therapy in Europe or North America on our own.

We may be unable to establish sales, marketing and distribution capabilities necessary to successfully commercialize our products.

We currently have only limited marketing capabilities and no direct or third-party sales or distribution capabilities. We currently plan to develop an internal sales force to serve certain North American markets and pursue strategic partnerships to obtain development and marketing support for territories outside North America. However, we may be unable to establish marketing, sales and distribution capabilities necessary to commercialize and gain market acceptance for our potential products. In addition, developing a sales force, or entering into co-promotion agreements with third parties, is expensive and time-consuming and could delay any product launch. Co-promotion or other marketing arrangements with third parties to commercialize potential products may also not be successful and could significantly limit the revenues we derive from Xcellerated T Cells.

We face competition in our industry, and many of our competitors have substantially greater experience and resources than we have.

Even if our Xcellerate Technology proves successful, we might not be able to remain competitive because of the rapid pace of technological development in the biotechnology field.

We are currently aware of several companies developing *ex vivo* cell-based immunotherapy products as a method of treating cancer and infectious diseases. These competitors include Antigenics, Inc., CancerVax Corporation, Cell Genesys, Inc., CellExSys, Inc., Dendreon Corporation, Favrille, Inc., Genitope Corporation, IDM, S.A., Kirin Pharmaceutical and Valeocyte Therapies. Some of our competitors have greater financial and other resources, larger research and development staffs and more experienced capabilities in researching, developing and testing products than we do. Many of these companies also have more experience in conducting clinical trials, obtaining FDA and other regulatory approvals and manufacturing, marketing and distributing therapeutic products. Smaller companies may successfully compete with us by establishing collaborative relationships with larger pharmaceutical companies or academic institutions. In addition, large pharmaceutical companies or other companies with greater resources or experience than us may choose to forgo *ex vivo* cell-based immunotherapy opportunities that would have otherwise been complementary to our product development and collaboration plans. Our competitors may succeed in developing, obtaining patent protection for or commercializing their products more rapidly than us. A competing company developing, or acquiring rights to, a more effective therapeutic product for the same diseases targeted by us, or one that offers significantly lower costs of treatment, could render our products noncompetitive or obsolete.

We plan significant growth, which we may not be able to effectively manage.

We will need to add a significant number of new personnel and expand our capabilities in order to successfully pursue our research, development and commercialization efforts and secure collaborations to market and distribute our products. This growth may strain our existing managerial, operational, financial and other resources. We also intend to add personnel in our research and development and manufacturing departments as we expand our clinical trial and research capabilities. Our failure to manage our growth effectively could delay or curtail our product development and commercialization efforts and harm our business.

If we lose key management or scientific personnel, our business could suffer.

Our success depends, to a significant extent, on the efforts and abilities of Ronald J. Berenson, M.D., our President and Chief Executive Officer, Robert L. Kirkman, M.D., our Chief Business Officer and Vice President, Stewart Craig, Ph.D., our Chief Operating Officer and Vice President, Mark Frohlich, M.D., our Medical Director and Vice President, and other members of our senior management and our scientific personnel. We do not have employment agreements with Dr. Berenson, Dr. Craig or several other members of our senior management. Additionally, any employment agreement that we may enter into will not ensure the retention of the employee. Since the pool of employees with relevant experience in immunology and biotechnology is small, replacing any of our senior management or scientific personnel would likely be costly and time-consuming. Although we maintain key person life insurance on Dr. Berenson, we do not maintain key person life insurance on any of our other officers, employees or consultants. The loss of the services of one or more of our key employees could delay or curtail our research and development and product development efforts.

We may undertake acquisitions in the future, and any difficulties from integrating these acquisitions could damage our ability to attain or maintain profitability.

We may acquire additional businesses, products or product candidates that complement or augment our existing business. Integrating any newly acquired business or product could be expensive and time- consuming. We may not be able to integrate any acquired business or product successfully or operate any acquired business profitably. Moreover, we many need to raise additional funds through public or private debt or equity financing to make acquisitions, which may result in dilution to stockholders and the incurrence of indebtedness that may include restrictive covenants.

Changes in the value of the British pound relative to the US dollar may adversely affect us.

Under our agreements with Lonza to purchase antibodies, we must make payments denominated in British pounds. As a result, from time to time, we are exposed to currency exchange risks. We do not engage in currency hedging. Accordingly, if the British pound strengthens against the US dollar, our payments to Lonza will increase in US dollar terms. We have paid a total of $4.9 million to Lonza under our agreements with them as of December 31, 2003, consisting of approximately $252,000, $1.7 million, $1.6 million and $1.3 million during the years ended December 31, 2000, 2001, 2002 and 2003, respectively. At December 31, 2003, we had no significant outstanding obligations or future contractual commitments to Lonza. However, if our future purchases from Lonza require payments in British pounds, we will continue to be exposed to currency exchange risks.

If we do not achieve our projected development goals in the time frames we announce and expect, the commercialization of our products may be delayed and, as a result, our stock price may decline.

From time to time, we estimate the timing of the accomplishment of various scientific, clinical, regulatory and other product development goals, which we sometimes refer to as milestones. These milestones may include the commencement or completion of scientific studies and clinical trials and the submission of regulatory filings. From time to time, we may publicly announce the expected timing of some of these milestones. All of these milestones will be based on a variety of assumptions. The actual timing of these milestones can vary dramatically compared to our estimates, in some cases for reasons beyond our control. If we do not meet these milestones as publicly announced, the commercialization of our products may be delayed and, as a result, our stock price may decline.

Risks Related To Our Intellectual Property

If we are unable to protect our proprietary rights, we may not be able to compete effectively.

Our success depends in part on obtaining, maintaining and enforcing our patents and in-licensed and proprietary rights throughout the world. We believe we own, or have rights under licenses to, issued patents and pending patent applications that are necessary to commercialize Xcellerated T Cells. However, the patents on which we rely may be challenged and invalidated, and our patent applications may not result in issued patents. Moreover,

our patents and patent applications may not be sufficiently broad to prevent others from practicing our technologies or developing competing products. We also face the risk that others may independently develop similar or alternative technologies or may design around our proprietary and patented technologies.

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in biotechnology patents has emerged to date in the United States. Furthermore, the application and enforcement of patent laws and regulations in foreign countries is even more uncertain, particularly where, as here, patent rights are co-owned with others, thus requiring their consent to ensure exclusivity in the marketplace. Accordingly, we cannot assure you that we will be able to effectively file, protect or defend our proprietary rights in the United States or in foreign jurisdictions on a consistent basis.

Third parties may successfully challenge the validity of our patents. We will only be able to protect our technologies from unauthorized use by third parties to the extent that valid and enforceable patents or other proprietary rights cover them. Because the issuance of a patent is not conclusive of its validity or enforceability, we cannot assure you how much protection, if any, will be given to our patents if we attempt to enforce them or if others challenge their validity in court. It is possible that a competitor may successfully challenge our patents or that a challenge will result in limiting the coverage of our patents. If the outcome of litigation is adverse to us, third parties may be able to use our technologies without payment to us.

In addition, it is possible that competitors may infringe upon our patents or successfully avoid them through design innovation. We may initiate litigation to police unauthorized use of our proprietary rights. However, the cost of litigation to uphold the validity of our patents and to prevent infringement could be substantial, particularly where patent rights are co-owned with others, thus requiring their participation in the litigation, and the litigation will consume time and other resources. Some of our competitors may be better able to sustain the costs of complex patent litigation because they have substantially greater resources. Moreover, if a court decides that our patents are not valid, we will not have the right to stop others from using our inventions. There is also the risk that, even if the validity of our patents were upheld, a court may refuse to stop others on the ground that their activities do not infringe upon our patents. Because protecting our intellectual property is difficult and expensive, we may be unable to prevent misappropriation of our proprietary rights.

We also rely on certain proprietary trade secrets and know-how, especially where we believe patent protection is not appropriate or obtainable. Trade secrets and know-how, however, are difficult to protect. We have taken measures to protect our unpatented trade secrets and know-how, including the use of confidentiality and invention assignment agreements with our employees, consultants and some of our contractors. It is possible, however, that these persons may unintentionally or willingly breach the agreements or that our competitors may independently develop or otherwise discover our trade secrets and know-how.

If the use of our technologies conflicts with the rights of others, we could be subject to expensive litigation or be required to obtain licenses from others to develop or market Xcellerated T Cells.

Our competitors or others may have or acquire patent rights that they could enforce against us. If they do so, we may be required to alter our Xcellerate Technology, pay licensing fees or cease activities. If our Xcellerate Technology conflicts with patent rights of others, third parties could bring legal action against us or our licensees, suppliers, customers or potential collaborators, claiming damages and seeking to enjoin manufacturing and marketing of the affected products. If these legal actions are successful, in addition to any potential liability for damages, we might have to obtain a license in order to continue to manufacture or market the affected products. A required license under the related patent may not be available on acceptable terms, if at all.

We may be unaware that the use of our technology conflicts with pending or issued patents. Because patent applications can take many years to issue, there may be currently pending applications, unknown to us, that may later result in issued patents upon which our Xcellerate Technology or Xcellerated T Cells may infringe. There

could also be existing patents of which we are unaware upon which our Xcellerate Technology or Xcellerated T Cells may infringe. In addition, if third parties file patent applications or obtain patents claiming technology also claimed by us in pending applications, we may have to participate in interference proceedings in the US Patent and Trademark Office to determine priority of invention. If third parties file oppositions in foreign countries, we may also have to participate in opposition proceedings in foreign tribunals to defend the patentability of the filed foreign patent applications. We may have to participate in interference proceedings involving our issued patents or our pending applications.

If a third party claims that we infringe upon its proprietary rights, any of the following may occur:

- we may become involved in time-consuming and expensive litigation, even if the claim is without merit;
- we may become liable for substantial damages for past infringement if a court decides that our technology infringes upon a competitor's patent;
- a court may prohibit us from selling or licensing our product without a license from the patent holder, which may not be available on commercially acceptable terms, if at all, or which may require us to pay substantial royalties or grant cross licenses to our patents; and
- we may have to redesign our technology or clinical candidate so that it does not infringe upon others' patent rights, which may not be possible or could require substantial funds or time.

If any of these events occurs, our business will suffer and the market price of our common stock will likely decline.

Our rights to use antibodies and technologies licensed to us by third parties are not within our control, and we may not be able to implement our Xcellerate Technology without these antibodies and technologies.

We have licensed patents and other rights which are necessary to our Xcellerate Technology and Xcellerated T Cells. Our business will significantly suffer if these licenses terminate, if the licensors fail to abide by the terms of the license or fail to prevent infringement by third parties or if the licensed patents or other rights are found to be invalid.

Our Xcellerate Technology uses two monoclonal antibodies that we license from third parties. We rely on our non-exclusive license from the Fred Hutchinson Cancer Research Center in Seattle, Washington to use the monoclonal antibody that binds to the CD3 molecule and our exclusive license from Diaclone S.A., or Diaclone, in Besancon, France to use the monoclonal antibody that binds to the CD28 molecule. These antibodies are necessary components of our Xcellerate Technology. Our rights to use these antibodies depend on the licensors abiding by the terms of those licenses and not terminating them. Our license agreement with the Fred Hutchinson Research Center is effective for 15 years following the first commercial sale of a product based on the license and may be terminated earlier by either party for material breach. Our license agreement with Diaclone is effective for 15 years from the date of the first FDA approval, or its foreign equivalent, of a therapeutic product containing a bead coated with the licensed antibody and may be terminated earlier by either party for material breach. With regard to our agreement with Diaclone, at the end of the relevant 15 year period, we will have a perpetual, irrevocable, fully-paid royalty-free, exclusive license. Except for certain circumstances which would permit us to obtain the monoclonal antibody from third parties or manufacture it ourselves, our agreement with Diaclone obligates us to purchase the monoclonal antibody from them until we begin preparing for Phase III clinical trials of a product covered by this license.

In addition, we have in-licensed several T cell activation patents and patent applications from the Genetics Institute, a subsidiary of Wyeth, Inc. The technology underlying these patents is a critical part of our Xcellerate Technology. Under our agreement, we have the right to enforce the licensed patents. The license from Genetics Institute terminates upon the end of the enforceable term of the last licensed patent or the license agreements

under which Genetics Institute has sublicensed rights to Xcyte, and may also be terminated earlier by either party for material breach. Of the four United States patents presently issued related to this technology, two patents expire in 2016 and two others expire in 2019.

If we violate the terms of our licenses, or otherwise lose our rights to these antibodies, patents or patent applications, we may be unable to continue development of our Xcellerate Technology. Our licensors or others may dispute the scope of our rights under any of these licenses. Additionally, the licensors under these licenses might breach the terms of their respective agreements or fail to prevent infringement of the licensed patents by third parties. Loss of any of these licenses for any reason could materially harm our financial condition and operating results.

Risks Relating To This Offering

You will suffer immediate and substantial dilution.

We expect the initial public offering price of our shares to be substantially higher than the book value per share of our outstanding common stock. Accordingly, investors purchasing shares of common stock in this offering will:

- pay a price per share that substantially exceeds the value of our assets after subtracting liabilities; and
- contribute 38.6% of the total amount invested to date to fund us but own only 27.4% of the shares of common stock outstanding after this offering, based on 10,606,098 shares of our common stock outstanding as of January 31, 2004 and assuming a 4,000,000 share offering at an assumed initial public offering price of $14 per share.

To the extent outstanding stock options or warrants are exercised, there will be further dilution to new investors. See “Dilution.”

If our principal stockholders, executive officers and directors choose to act together, they may be able to control our management and operations, acting in their best interests and not necessarily those of other stockholders.

Our executive officers, directors and principal stockholders, and entities affiliated with them, will beneficially own in the aggregate approximately 62.6% of our common stock following this offering. This significant concentration of share ownership may adversely affect the trading price of our common stock because investors often perceive disadvantages in owning stock in companies with controlling stockholders. These stockholders, acting together, will have the ability to exert substantial influence over all matters requiring approval by our stockholders, including the election and removal of directors and any proposed merger, consolidation or sale of all or substantially all of our assets. In addition, they could dictate the management of our business and affairs. This concentration of ownership could have the effect of delaying, deferring or preventing a change in control of us or impeding a merger, consolidation, takeover or other business combination that could be favorable to you.

The future sale of our common stock could negatively affect our stock price.

After this offering, based on shares outstanding as of January 31, 2004 we will have approximately 14,606,098 shares of common stock outstanding, or 15,206,098 shares if the underwriters exercise their over-allotment option in full. The 4,000,000 shares sold in this offering, or 4,600,000 shares if the underwriters exercise their over-allotment option in full, will be freely tradable without restriction under the federal securities laws unless purchased by our affiliates. The remaining shares of common stock outstanding after this offering will be available for public sale subject in some cases to volume, lock-up and other limitations. See “Shares eligible for future sale.”

If our common stockholders sell substantial amounts of common stock in the public market, or the market perceives that such sales may occur, the market price of our common stock could fall. After this offering,

according to the terms of the investors rights agreement, assuming the exercise of all warrants that terminate upon the closing and including the issuance of approximately 1,346,771 shares of our common stock (as of January 31, 2004) pursuant to convertible promissory notes, the holders of approximately 9,150,141 shares of our common stock or warrants to purchase shares of our common stock will have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. Furthermore, if we were to include in a company-initiated registration statement shares held by those holders pursuant to the exercise of their registrations rights, the sale of those shares could impair our ability to raise needed capital by depressing the price at which we could sell our common stock.

In addition, we will need to raise substantial additional capital in the future to fund our operations. If we raise additional funds by issuing equity securities, our stock price may decline and our existing stockholders may experience significant dilution.

An active, liquid trading market for our common stock may never develop.

Prior to this offering, there was no public market for our common stock. An active trading market for our common stock may not develop following this offering. You may not be able to sell your shares quickly or at the market price if trading in our stock is not active. The initial public offering price may not be indicative of prices that will prevail in the trading market. See “Underwriting” for more information regarding the factors considered in determining the initial public offering price.

Our common stock may experience extreme price and volume fluctuations, which could lead to costly litigation for us and make an investment in us less appealing.

The market price of our common stock may fluctuate substantially due to a variety of factors, including:

- results of our clinical trials;
- announcements of technological innovations or new products or services by us or our competitors;
- media reports and publications about immunotherapy;
- announcements concerning our competitors or the biotechnology industry in general;
- new regulatory pronouncements and changes in regulatory guidelines;
- general and industry-specific economic conditions;
- additions to or departures of our key personnel;
- changes in financial estimates or recommendations by securities analysts;
- variations in our quarterly results;
- announcements about our collaborators or licensors; and
- changes in accounting principles.

The market prices of the securities of biotechnology companies, particularly companies like ours without consistent product revenues and earnings, have been highly volatile and are likely to remain highly volatile in the future. This volatility has often been unrelated to the operating performance of particular companies. In the past, companies that experience volatility in the market price of their securities have often faced securities class action litigation. Moreover, market prices for stocks of biotechnology-related and technology companies, particularly following an initial public offering, frequently reach levels that bear no relationship to the operating performance of these companies. These market prices generally are not sustainable and are highly volatile. Whether or not meritorious, litigation brought against us could result in substantial costs, divert our management’s attention and resources and harm our financial condition and results of operations.

Our amended and restated certificate of incorporation and bylaws may delay or prevent a change in our management.

Our amended and restated certificate of incorporation and bylaws will contain provisions that could delay or prevent a change in our board of directors and management teams. Some of these provisions:

- authorize the issuance of preferred stock that can be created and issued by the board of directors without prior stockholder approval, commonly referred to as "blank check" preferred stock, with rights senior to those of our common stock; and
- provide for a classified board of directors.

These provisions could make it more difficult for common stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt to replace our current management team.

We may allocate the net proceeds from this offering in ways with which you may not agree.

We expect to use the net proceeds from this offering to fund clinical trial activities, manufacturing and preclinical research and development activities and for other general corporate purposes, including capital expenditures, complementary technology acquisition and working capital. See "Use of proceeds." Our management, however, has broad discretion in the use of the net proceeds from this offering and could spend the net proceeds in ways that do not necessarily improve our operating results or the value of our common stock.

We do not intend to pay cash dividends on our common stock in the foreseeable future.

We do not anticipate paying cash dividends on our common stock in the foreseeable future. Any payment of cash dividends will depend on our financial condition, results of operations, capital requirements and other factors and will be at the discretion of our board of directors. Accordingly, investors will have to rely on capital appreciation, if any, to earn a return on their investment in our common stock. Furthermore, we may in the future become subject to contractual restrictions on, or prohibitions against, the payment of dividends.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections titled “Prospectus summary,” “Risk factors,” “Management’s discussion and analysis of financial condition and results of operations” and “Business,” contains forward-looking statements. Forward-looking statements convey our current expectations or forecasts of future events. All statements contained in this prospectus other than statements of historical fact are forward-looking statements. Forward-looking statements include statements regarding our future financial position, business strategy, budgets, projected costs, plans and objectives of management for future operations. The words “may,” “continue,” “estimate,” “intend,” “plan,” “will,” “believe,” “project,” “expect,” “anticipate” and similar expressions may identify forward-looking statements, but the absence of these words does not necessarily mean that a statement is not forward-looking.

Any or all of our forward-looking statements in this prospectus may turn out to be inaccurate. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. They may be affected by inaccurate assumptions we might make or by known or unknown risks and uncertainties, including the risks, uncertainties and assumptions described in “Risk factors.” In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur as contemplated, and actual results could differ materially from those anticipated or implied by the forward-looking statements.

You should not unduly rely on these forward-looking statements, which speak only as of the date of this prospectus. Unless required by law, we undertake no obligation to publicly update or revise any forward-looking statements to reflect new information or future events or otherwise. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus. See “Where you can find additional information.”

USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of the 4,000,000 shares of common stock we are offering will be approximately $50.9 million, assuming an initial public offering price of $14 per share, after deducting underwriting discounts and commissions and the estimated offering expenses. If the underwriters exercise their over-allotment option in full, we estimate the net proceeds to us from this offering will be approximately $58.7 million.

We expect to use the net proceeds of this offering for working capital and general corporate purposes, including:

- clinical trial activities;
- manufacturing activities;
- preclinical research and development activities;
- capital expenditures, including expansion of the Company's manufacturing facilities; and
- complementary technology acquisition.

Although we have identified some types of uses above, we have and reserve broad discretion to use the proceeds from this offering differently. When and if the opportunity arises, we may use a portion of the proceeds to acquire or invest in complementary businesses, products or technologies. We currently have no commitments or agreements, and are not involved in any negotiations, to acquire any businesses, products or technologies. Pending any ultimate use of any portion of the proceeds from this offering, we intend to invest the proceeds in short-term, investment-grade and interest-bearing instruments.

Based on the current status of our product development and collaboration plans, we believe that the net proceeds of this offering, together with our cash, cash equivalents and investments, will be adequate to satisfy our capital needs through at least the end of the second quarter of 2005. See "Management's discussion and analysis of financial condition and results of operations—Liquidity and capital resources."

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock and do not currently anticipate declaring or paying cash dividends on our common stock in the foreseeable future. We currently intend to retain all of our future earnings, if any, to finance operations. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on a number of factors, including future earnings, capital requirements, financial conditions, future prospects, contractual restrictions and other factors that our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth our cash, cash equivalents and short term investments and capitalization as of December 31, 2003:

- on an actual basis;
- on a pro forma as adjusted basis to further reflect:
  - the sale of 4,000,000 shares of our common stock we are offering at an assumed initial public offering price of $14 per share, after deducting underwriting discounts and commissions and estimated offering expenses to be paid by us;
  - the filing of an amended and restated certificate of incorporation to provide for an authorized capital stock of 5,000,000 shares of preferred stock and 100,000,000 shares of common stock;
  - the conversion of all 6,781,814 shares of our preferred stock outstanding as of December 31, 2003 into 6,781,814 shares of our common stock, which will become effective at the closing of this offering;
  - the net exercise of warrants outstanding as of December 31, 2003, which will expire at the closing of this offering, to purchase 907,317 shares of our common stock at a weighted average exercise price of $0.30 per share, resulting in the issuance of 888,139 shares of common stock, assuming an initial public offering price of $14 per share;
  - the conversion of shares of our preferred stock issuable upon the net exercise of warrants outstanding as of December 31, 2003, which will expire at the closing of this offering, to purchase 86,727 shares of our preferred stock at a weighted average exercise price of $7.36 per share, resulting in the issuance of 42,750 shares of common stock, assuming an initial public offering price of $14 per share;
  - the conversion of warrants outstanding as of December 31, 2003 to purchase 46,607 shares of our preferred stock into warrants to purchase 46,607 shares of our common stock, which will become effective at the closing of this offering; and
  - the conversion of the convertible promissory notes we issued in October 2003 for net proceeds of approximately $12.7 million into approximately 1,339,943 shares of our common stock, which includes the conversion of approximately $177,000 in accrued interest as of December 31, 2003, and the recognition of approximately $12.4 million in interest expense associated with the discount on the notes, which will become effective upon the closing of this offering.

	As of December 31, 2003	
	Actual	Pro forma as adjusted
	(unaudited, in thousands, except share and per share data)	
Cash, cash equivalents and short-term investments	$ 13,540	$ 64,420
Long-term obligations, less current portion	$ 1,555	$ 1,555
Redeemable convertible preferred stock; 6,781,814 shares issued and outstanding, actual; no shares issued and outstanding, pro forma as adjusted	64,604	—
Redeemable convertible preferred stock warrants	2,467	—
Stockholders' equity (deficit):		
Preferred stock, $0.001 par value per share; 42,000,000 shares authorized, actual; 5,000,000 shares authorized, pro forma as adjusted; no shares issued pro forma as adjusted	—	—
Common stock, par value $0.001 per share; 70,000,000 shares authorized, actual; 100,000,000 shares authorized, pro forma as adjusted; 1,546,624 shares issued and outstanding, actual; 10,599,270 shares issued and outstanding, pro forma as adjusted	2	15
Additional paid-in capital	24,532	166,705
Deferred stock compensation	(2,774)	(2,774)
Accumulated other comprehensive income	(5)	(5)
Deficit accumulated during the development stage	(86,595)	(99,001)
Total stockholders' equity (deficit)	(64,840)	64,940
Total capitalization	$ 3,786	$ 66,495

The table above should be read in conjunction with our financial statements and related notes included in this prospectus. This table is based on 10,599,270 shares of our common stock outstanding as of December 31, 2003 and excludes:

- 46,607 shares of our common stock issuable upon the exercise of warrants outstanding as of December 31, 2003 at a weighted average exercise price of $7.94 per share;
- 717,615 shares of our common stock issuable upon the exercise of stock options outstanding as of December 31, 2003 under our 1996 Stock Option Plan at a weighted average exercise price of $4.48 per share;
- 278,691 shares of our common stock reserved for future issuance under our 1996 Stock Option Plan; and
- 636,363 shares of our common stock reserved for future issuance under our 2003 Stock Plan, 109,090 shares of our common stock reserved for future issuance under our 2003 Employee Stock Purchase Plan and 90,909 shares of our common stock reserved for future issuance under our 2003 Directors' Stock Option Plan, as of December 31, 2003.

DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the public offering price per share you pay in this offering and the net tangible book value per share of our common stock immediately after this offering. Our net tangible book value as of December 31, 2003 was approximately $(64.8) million, or $(41.92) per share of common stock. Net tangible book value per share is equal to our total tangible assets minus total liabilities, redeemable convertible preferred stock and redeemable convertible preferred stock warrants, all divided by the number of shares of common stock outstanding as of December 31, 2003. Our pro forma as adjusted net tangible book value as of December 31, 2003, before we receive the net proceeds from and issue shares in this offering, was approximately $14.1 million, or $1.33 per share of common stock. Pro forma as adjusted net tangible book value per share, before we receive the net proceeds from and issue shares in this offering, gives effect to:

- the conversion of all 6,781,814 shares of our preferred stock outstanding as of December 31, 2003, into 6,781,814 shares of our common stock, which will become effective at the closing of this offering;
- the conversion of warrants outstanding as of December 31, 2003 to purchase 46,607 shares of our preferred stock into warrants to purchase 46,607 shares of our common stock, which will become effective at the closing of this offering;
- the net exercise of warrants outstanding as of December 31, 2003, which will expire at the closing of this offering, to purchase 907,317 shares of our common stock at a weighted average exercise price of $0.30 per share, resulting in the issuance of 888,139 shares of common stock, assuming an initial public offering price of $14 per share;
- the conversion of shares of our preferred stock issuable upon the net exercise of warrants outstanding as of December 31, 2003, which will expire at the closing of this offering, to purchase 86,727 shares of our preferred stock at a weighted average exercise price of $7.36 per share, resulting in the issuance of 42,750 shares of common stock, assuming an initial public offering price of $14 per share; and
- the conversion of the convertible promissory notes we issued in October 2003 for net proceeds of approximately $12.7 million into approximately 1,339,943 shares of our common stock, which includes the conversion of approximately $177,000 in accrued interest as of December 31, 2003, and the recognition of approximately $12.4 million in interest expense associated with the discount on the notes, which will become effective upon the closing of this offering.

After giving effect to the sale of the 4,000,000 shares of common stock we are offering at an assumed initial public offering price of $14 per share, and after deducting underwriting discounts and commissions and our estimated offering expenses, our pro forma as adjusted net tangible book value as of December 31, 2003 would have been approximately $64.9 million, or $4.45 per share of common stock. This represents an immediate increase in pro forma net tangible book value of $46.37 per share to existing stockholders and an immediate dilution of $9.55 per share to new investors. The following table illustrates this calculation on a per share basis:

Assumed initial public offering price per share		$ 14.00
Net tangible book value per share as of December 31, 2003, actual	$ (41.92)	
Increase attributable to the conversion of convertible promissory notes into shares of our common stock, the recognition of interest expense associated with the discount on the notes, the conversion of our convertible preferred stock and the net exercise and conversion of warrants	43.25	
Pro forma as adjusted net tangible book value per share as of December 31, 2003, before we receive the net proceeds from and issue shares in this offering	1.33	
Pro forma increase per share attributable to the offering	3.12	
Pro forma as adjusted net tangible book value per share after this offering		4.45
Pro forma dilution per share to new investors		$ 9.55

If the underwriters exercise their over-allotment option in full, pro forma as adjusted net tangible book value as of December 31, 2003 will increase to $4.79 per share, representing an increase to existing stockholders of $46.71 per share, and there will be an immediate dilution of $9.21 per share to new investors.

The following table summarizes, on a pro forma as adjusted basis as of December 31, 2003, after giving effect to this offering, at an assumed initial public offering price of $14 per share, and the pro forma adjustments referred to above, the total number of shares of our common stock purchased from us and the total consideration and average price per share paid by existing stockholders and by new investors:

	Total shares		Total consideration		Average price per share
	Number	%	Amount	%	
Existing stockholders	10,599,270	72.6%	$ 89,038,000	61.4%	$ 8.40
New investors	4,000,000	27.4	56,000,000	38.6	
Total	14,599,270	100.0%	$ 145,038,000	100.0%	

If the underwriters exercise their over-allotment option in full, the following will occur:

- the pro forma as adjusted percentage of shares of our common stock held by existing stockholders will decrease to approximately 69.7% of the total number of pro forma as adjusted shares of our common stock outstanding after this offering; and
- the pro forma as adjusted number of shares of our common stock held by new public investors will increase to 4,600,000, or approximately 30.3% of the total pro forma as adjusted number of shares of our common stock outstanding after this offering.

The tables and calculations above are based on pro forma 10,599,270 shares of our common stock outstanding as of December 31, 2003 and exclude:

- 46,607 shares of our common stock issuable upon the exercise of warrants outstanding as of December 31, 2003, at a weighted average exercise price of $7.94 per share;

- 717,615 shares of our common stock issuable upon the exercise of stock options outstanding as of December 31, 2003 under our 1996 Stock Option Plan at a weighted average exercise price of $4.48 per share;
- 278,691 shares of our common stock reserved for future issuance under our 1996 Stock Option Plan; and
- 636,363 shares of our common stock reserved for future issuance under our 2003 Stock Plan, 109,090 shares of our common stock reserved for future issuance under our 2003 Employee Stock Purchase Plan and 90,909 shares of our common stock reserved for future issuance under our 2003 Directors' Stock Option Plan, as of December 31, 2003.

The exercise of outstanding options and warrants having an exercise price less than the initial public offering price will increase dilution to new investors.

SELECTED FINANCIAL DATA

This section presents our historical financial data. The following should be read with, and is qualified in its entirety by reference to, the financial statements included in this prospectus, including the notes to the financial statements, and the information under "Management's discussion and analysis of financial condition and results of operations." The statement of operations data for the years ended December 31, 2001, 2002 and 2003 and the balance sheet data as of December 31, 2002 and 2003 have been derived from our audited financial statements included elsewhere in this prospectus. The statement of operations data for the years ended December 31, 1999 and 2000 and the balance sheet data as of December 31, 1999, 2000 and 2001 have been derived from our audited financial statements that are not included in this prospectus.

	Years ended December 31,				
	1999	2000	2001	2002	2003
	(in thousands, except per share data)				
Statement of Operations Data					
Revenue:					
Collaborative agreement	$ —	$ —	$ —	$ —	$ 170
Government grant	16	98	30	—	—
Total revenue	16	98	30	—	170
Operating expenses:					
Research and development	5,471	11,257	14,701	14,663	13,685
General and administrative	1,654	2,403	5,204	4,979	4,322
Total operating expenses	7,125	13,660	19,905	19,642	18,007
Loss from operations	(7,109)	(13,562)	(19,875)	(19,642)	(17,837)
Other income (expense), net	162	621	363	189	(620)
Net loss	(6,947)	(12,941)	(19,512)	(19,453)	(18,457)
Accretion of preferred stock	—	—	(8,411)	(8,001)	—
Net loss applicable to common stockholders	$ (6,947)	$ (12,941)	$ (27,923)	$ (27,454)	$ (18,457)
Basic and diluted net loss per common share	$ (6.32)	$ (11,86)	$ (22.14)	$ (19.34)	$ (12.40)
Shares used in basic and diluted net loss per common share calculation	1,100	1,091	1,261	1,420	1,488
Pro forma basic and diluted net loss per common share (unaudited)[1]					$ (2.10)
Shares used in pro forma basic and diluted net loss per common share calculation (unaudited)[1]					8,570

[1] The pro forma basic and diluted net loss per share reflects the weighted effect of the assumed conversion of redeemable convertible preferred stock and convertible promissory notes into common stock. See note 12 to our financial statements for information regarding computation of basic and diluted net loss per share and pro forma basic and diluted net loss per share.

	As of December 31,				
	1999	2000	2001	2002	2003
	(in thousands)				
Balance Sheet Data					
Cash, cash equivalents and short-term investments	$ 7,363	$ 23,926	$ 21,098	$ 17,344	$ 13,540
Working capital	6,100	21,785	19,135	15,570	(653)
Total assets	10,055	28,479	24,727	21,535	18,498
Long-term obligations, less current portion	854	952	1,046	1,514	1,555
Redeemable convertible preferred stock and warrants	23,405	49,053	57,629	65,673	67,071
Deficit accumulated during the development stage	(16,232)	(29,173)	(48,685)	(68,138)	(86,595)
Total stockholders' deficit	(15,804)	(25,384)	(36,260)	(48,125)	(64,840)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with our financial statements and the notes to those financial statements included elsewhere in this prospectus. This discussion contains forward-looking statements that involve risks and uncertainties. As a result of many factors, such as those set forth under "Risk factors" and elsewhere in this prospectus, our actual results may differ materially from those anticipated in these forward-looking statements.

Overview

We are a biotechnology company developing a new class of therapeutic products designed to enhance the body's natural immune responses to treat cancer, infectious diseases and other medical conditions associated with weakened immune systems. We derive our therapeutic products from a patient's own T cells, which are cells of the immune system that orchestrate immune responses and can detect and eliminate cancer cells and infected cells in the body. We use our patented and proprietary Xcellerate Technology to generate activated T cells, which we call Xcellerated T Cells, from blood that is collected from the patient. Activated T cells are T cells that have been stimulated to carry out immune functions. Our Xcellerate Technology is designed to rapidly activate and expand the patient's T cells outside of the body. These Xcellerated T Cells are then administered to the patient. We believe, based on clinical trials to date, that our Xcellerate Technology can produce Xcellerated T Cells in sufficient numbers to generate rapid and potent immune responses to treat a variety of medical conditions.

Since our inception in 1996, we have focused our activities primarily on the development of these therapeutic products. We are a development-stage company and have incurred significant losses since our inception. As of December 31, 2003, our deficit accumulated during the development stage was $86.6 million. Our operating expenses consist of research and development expenses and general and administrative expenses.

We have recognized revenues from inception through December 31, 2003 of approximately $414,000 from sublicense fees, payments under a collaborative agreement and income from a National Institutes of Health Phase I Small Business Innovation Research, or SBIR, grant in CLL. We intend to continue to apply for other grants in the future. We currently do not market any products and will not for several years, if at all. Accordingly, we do not expect to have any product sales or royalty revenue for a number of years. Our net losses are a result of research and development and general and administrative expenses incurred to support our operations. We anticipate incurring net losses over at least the next several years as we complete our clinical trials, apply for regulatory approvals, continue development of our technology and expand our operations.

Research and Development

To date, our research and development expenses have consisted primarily of costs incurred for drug discovery and research, preclinical development, clinical trials and regulatory activities. Research and development activity-related costs include:

- payroll and personnel-related expenses;
- clinical trial and regulatory-related costs;
- laboratory supplies;
- contractual costs associated with developing antibodies and beads;
- technology license costs;
- rent and facility expenses for our laboratory and cGMP-grade manufacturing facilities; and
- scientific consulting fees.

Our research and development efforts to date have primarily focused on the development of our proprietary Xcellerate Technology and Xcellerated T Cells. From inception through December 31, 2003, we incurred research and development expenses of approximately $66.8 million, substantially all of which relate to the research and development of this technology. Currently, we are focusing our efforts on advancing our product through clinical trials. Because of the risks and uncertainties inherent in the clinical trials and regulatory process, we are unable to estimate with any certainty the length of time or expenses to continue development of Xcellerated T Cells for commercialization. However, we expect our research and development expenses to increase as we continue to improve our proprietary Xcellerate Technology and develop Xcellerated T Cells for additional clinical indications.

General and Administrative Expenses

Our general and administrative expenses are costs associated with supporting our operations, including payroll and personnel-related expenses and professional fees. In addition, rent and facility expenses for our administrative office area and other general office support activities are also included in our general and administrative expenses.

Critical Accounting Policies

We have based our discussion and analysis of our financial condition and results of operations on our financial statements, which we have prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and assumptions that affect the amounts reported in the financial statements. Actual results could differ from those estimates. While note 1 to our financial statements summarizes each of our significant accounting policies that we believe is important to the presentation of our financial statements, we believe the following accounting policies to be critical to the estimates and assumptions used in the preparation of our financial statements.

Stock-Based Compensation

We have adopted the disclosure-only provisions of Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards No. 123, *Accounting for Stock-Based Compensation* (SFAS 123). Accordingly, we apply Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* (APB 25), and related interpretations in accounting for stock options. Pursuant to APB 25, we recognize employee stock-based compensation expense based on the intrinsic value of the option at the date of grant. Deferred stock-based compensation includes amounts recorded when the exercise price of an option is lower than the fair value of the underlying common stock on the date of grant. We amortize deferred stock-based compensation over the vesting period of the option using the graded vesting method.

We record stock options granted to non-employees using the fair value approach in accordance with SFAS 123 and Emerging Issues Task Force Consensus Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*. We periodically revalue the options to non-employees over their vesting terms. We determine the fair value of options granted to non-employees using the Black-Scholes option-pricing model.

We determine the fair value of our common stock for purposes of these calculations based on our review of the primary business factors underlying the value of our common stock on the date these option grants are made or revalued, viewed in light of this offering and the expected initial public offering price per share.

Revenue Recognition

To date, we have generated no revenues from sales of products. Revenues relate to fees received for licensed technology, cost reimbursement contracts and an SBIR grant awarded to us by the National Institutes of Health. We recognize revenue associated with up-front license fees and research and development funding payments ratably over the relevant periods specified in the agreement, which generally is the research and development

period. We recognize revenue under research and development cost-reimbursement agreements as the related costs are incurred. We recognize revenue related to grant agreements as the related research and development expenses are incurred.

Cash, Cash Equivalents and Investments

We classify all investment securities as available-for-sale, carried at fair value. We report unrealized gains and losses as a separate component of stockholders' deficit. We include amortization, accretion, interest and dividends, realized gains and losses and declines in value judged to be other-than-temporary on available-for-sale securities in interest income. Statement of Financial Accounting Standards No. 115, *Accounting for Certain Investments in Debt and Equity Securities*, and Securities and Exchange Commission (SEC) Staff Accounting Bulletin (SAB) 59, *Accounting for Noncurrent Marketable Equity Securities*, provide guidance on determining when an investment is other-than-temporarily impaired. This evaluation depends on the specific facts and circumstances. Factors that we consider in determining whether an other-than-temporary decline in value has occurred include: the market value of the security in relation to its cost basis; the financial condition of the investee; and the intent and ability to retain the investment for a sufficient period of time to allow for possible recovery in the market value of the investment.

Results of Operations

Years Ended December 31, 2003 and 2002

Revenue

Revenue was approximately $170,000 in the year ended December 31, 2003, consisting of funds received under a cost-reimbursement agreement. We recognized no revenue in the year ended December 31, 2002.

Research and Development

Research and development expenses represented approximately 76% and 75% of our operating expenses for the years ended December 31, 2003 and 2002, respectively. Research and development expenses decreased 6.7%, from $14.7 million in the year ended December 31, 2002 to $13.7 million in the year ended December 31, 2003. The decrease was primarily due to a reduction in technology license costs, contractual payments relating to developing our bead technology and non-cash stock compensation expense. Technology license costs totaled $829,000 in the year ended December 31, 2002, representing the value of stock and cash paid for a license we obtained from an academic institution. We incurred no technology license costs in the year ended December 31, 2003. Expenses associated with developing our bead technology totaled $500,000 in 2002, with no such costs incurred in 2003. Non-cash stock compensation expense decreased from $1.3 million in the year ended December 31, 2002 to $884,000 in the year ended December 31, 2003, as a result of a reduction in the number of options granted. Decreases in research and development expenses were partially offset by an increase of $220,000 in contractual payments relating to developing our antibody technology, in addition to increases in clinical trial and laboratory supplies costs. The increase in payments related to our antibody technology resulted from the third-party manufacture of the antibodies that we use in our Xcellerate Technology. Since we store these antibodies in our inventory for use when needed in clinical trials and research and development activities, the manufacture of these antibodies occurs periodically, resulting in a corresponding increase in expense from time to time.

General and Administrative

General and administrative expenses represented approximately 24% and 25% of our operating expenses for the years ended December 31, 2003 and 2002, respectively. General and administrative expenses decreased 13.2%, from $5.0 million in the year ended December 31, 2002 to $4.3 million in the year ended December 31, 2003. The decrease was due primarily to a decrease in non-cash stock compensation expense and the absence of expenses related to an initial public offering registration process that we initiated and terminated in 2002. Non-cash stock compensation expense decreased 40%, from $1.3 million in the year ended December 31, 2002 to

$783,000 in the year ended December 31, 2003, as a result of a reduction in the number of options granted. Costs we incurred in association with the initial public offering registration process in the year ended December 31, 2002 totaled $272,000.

Other Income (Expense)

Other income, comprised primarily of interest income and interest expense, totaled $189,000 in the year ended December 31, 2002, compared to other expense of $620,000 in the year ended December 31, 2003. Interest income decreased 68%, from $467,000 in the year ended December 31, 2002 to $149,000 in the year ended December 31, 2003, due to decreased cash and investment balances upon which interest is earned and declining interest rates. Interest expense increased 188% from $267,000 in the year ended December 31, 2002 to $768,000 in the year ended December 31, 2003, due primarily to interest expense associated with the convertible promissory notes issued in October 2003.

Years Ended December 31, 2002 and 2001

Revenue

Revenue was approximately $30,000 in the year ended December 31, 2001, consisting of income from a National Institutes of Health SBIR grant. We recognized no revenue in the year ended December 31, 2002.

Research and Development

Research and development expenses represented approximately 75% and 74% of our operating expenses for the years ended December 31, 2002 and 2001, respectively. Research and development expenses totaled $14.7 million in each of the years ended December 31, 2002 and 2001. While total expenses were the same for 2002 and 2001, several individual components of research and development expense fluctuated significantly between the years. Technology license costs, contractual payments relating to developing our bead technology and salary and other personnel-related expenses increased from 2001 to 2002. Technology license costs comprised the largest increase and totaled $829,000 in the year ended December 31, 2002, representing the value of stock and cash paid for a license we obtained from an academic institution. We incurred no technology license costs in the year ended December 31, 2001. These increases were offset by a reduction of $1.1 million in contractual payments relating to developing our antibody technology, in addition to reduced non-cash compensation expense. The higher level of payments in 2001 related to our antibody technology resulted from the third-party manufacture of the antibodies that we use in our Xcellerate Technology. Since we store these antibodies in our inventory for use when needed in clinical trials and research and development activities, the manufacture of these antibodies occurs periodically, resulting in a corresponding increase in expense from time to time. The reduction in non-cash compensation expense resulted primarily from a decrease in management's estimate of the fair market value per share of common stock.

General and Administrative

General and administrative expenses represented approximately 25% and 26% or our operating expenses for the years ended December 31, 2002 and 2001, respectively. General and administrative expenses decreased 4.3%, from $5.2 million in the year ended December 31, 2001 to $5.0 million in the year ended December 31, 2002. The decrease was due primarily to an $880,000 reduction in professional fees related to an initial public offering that we withdrew in 2001, partially offset by a $351,000 increase in non-cash stock compensation and increases in salary and other personnel-related expenses. The increase in non-cash stock compensation resulted from an increase in the number of options granted.

Other Income (Expense)

Other income, comprised primarily of interest income and interest expense, decreased 48%, from $363,000 in the year ended December 31, 2001 to $189,000 in the year ended December 31, 2002. Interest income decreased 33%, from $698,000 in the year ended December 31, 2001 to $467,000 in the year ended December 31, 2002,

due to decreased cash and investment balances upon which interest is earned and declining interest rates. Interest expense increased 2.7%, from $260,000 in the year ended December 31, 2001 to $267,000 in the year ended December 31, 2002, due primarily to higher debt balances related to equipment financings.

Stock-Based Compensation

During the year ended December 31, 2003, we recorded deferred stock-based compensation totaling $2.4 million. During the years ended December 31, 2001 and 2002, we recorded deferred stock-based compensation totaling $1.7 million and $3.2 million, respectively. We amortize the deferred stock-based compensation to expense using the graded vesting method. As of December 31, 2003, there was $2.8 million of deferred stock-based compensation to be amortized in future periods as follows: $1.7 million in 2004, $711,000 in 2005, $291,000 in 2006 and $51,000 in 2007. In 2001 and 2002, we granted non-employee stock options to purchase 71,814 and 6,363 shares of our common stock, respectively. During the year ended December 31, 2003, we issued options and warrants to non-employees to purchase 24,543 shares of our common stock. We determined the fair value of options and warrants granted to non-employees using the Black-Scholes option-pricing model. We will periodically measure this value as the underlying options vest. Total stock-based compensation expense for non-employees was $1.1 million, $65,000 and $360,000 for the years ended December 31, 2001, 2002 and 2003 respectively.

Income Taxes

We have incurred net operating losses since inception, and we have consequently not paid any federal, state or foreign income taxes. As of December 31, 2003, we had net operating loss carryforwards of approximately $74 million and research and development tax credit carryforwards of approximately $3.2 million. If not utilized, the net operating loss and tax credit carryforwards will expire at various dates beginning in 2011. If we do not achieve profitability, our net operating loss carryforwards may be lost. In addition, the change-in-ownership provisions as specified under Section 382 of the Internal Revenue Code of 1986, as amended, may substantially limit utilization of net operating loss and tax credit carryforwards annually. We are currently not subject to these limitations. However, any future annual limitations may result in the expiration of our net operating loss and tax credit carryforwards before utilization.

Our deferred tax assets consist primarily of net operating loss carryforwards. Because of our history of operating losses, we do not have a sufficient basis to project that future income will be sufficient to realize the deferred tax assets during the carryforward period. As a result, we have provided a full valuation allowance on the net deferred tax assets for all periods presented. The valuation allowance has increased each fiscal year primarily due to that fiscal year’s net operating loss carryforward.

Liquidity and Capital Resources

As of December 31, 2003, we had cash, cash equivalents and short-term investments of $13.5 million, with cash equivalents being held in highly liquid money market accounts with financial institutions. Cash, cash equivalents and short-term investments were $21.1 million as of December 31, 2001, and $17.3 million as of December 31, 2002.

In October 2003, we raised net proceeds of $12.7 million from the sale of 6% convertible promissory notes. These convertible promissory notes will convert into approximately 1,339,943 shares of common stock (as of December 31, 2003) at the closing of this offering. If this offering does not close, the convertible promissory notes will be payable upon demand in October 2004, unless the holders of a majority of the aggregate principal amount of the notes elect after April 2004 to accelerate the maturity date, in which case we will have to repay the $12.7 million aggregate principal amount of the notes plus accrued and unpaid interest. Additionally, holders of our preferred stock may elect to require us to redeem their shares at any time at the original price paid per share. As of December 31, 2003, 6,781,814 shares of our preferred stock were outstanding. If the holders of these shares elect to require us to redeem their shares, we would have to pay an aggregate redemption price of approximately $76.5 million. However, the holders of our preferred stock will not have the right to force us to

redeem their shares after their shares convert into shares of our common stock, which will occur immediately before completion of our initial public offering.

We have financed our operations since inception through private placements of equity securities, grant revenue, fees from a sublicense agreement, payments under a collaborative agreement, equipment financings and interest income earned on cash, cash equivalents and investments. From inception through December 31, 2003, we have raised net proceeds of $75.6 million from private equity financings and $12.7 million from the sale of convertible promissory notes. Since our inception to December 31, 2003, we have received $414,000 in revenue, $6.1 million in equipment financings and $3.5 million in interest income. To date, inflation has not had a material effect on our business.

In August 2003, the National Institutes of Health awarded us a $1.2 million SBIR grant to help fund our clinical trial to evaluate the use of Xcellerated T Cells to treat patients with CLL. The National Institutes of Health recently announced clarifications to the eligibility requirements for their SBIR grants. As a result, it is uncertain whether we may be eligible to receive any funds under this grant. Accordingly, we do not intend to accept any funds from this grant until this uncertainty is resolved.

Since our inception, investing activities, other than purchases and maturities of investments, have consisted primarily of purchases of property and equipment. As of December 31, 2003, our investment in property and equipment was $5.9 million. We anticipate our capital expenditures will increase in the future as we construct and renovate our planned manufacturing plant and expand our current facilities.

Net cash used in operating activities was $15.2 million for the year ended December 31, 2002 and $15.5 million for the year ended December 31, 2003. Net cash used in operating activities was $15.1 million in the year ended December 31, 2001. Expenditures in these periods were generally a result of research and development expenses and general and administrative expenses in support of our operations.

We have entered into agreements to develop bead and antibody technology that require significant cash expenditures, including an agreement with Dynal under which we have agreed to make payments totaling $3.0 million upon the accomplishment of bead development activities. Additionally, we have two agreements with Lonza under which we agreed to make payments to develop and produce cGMP-grade antibodies totaling $4.9 million. As of December 31, 2003, we have paid $2.5 million to Dynal and the entire $4.9 million to Lonza. Under our license agreement with Genetics Institute, we must spend no less than $500,000 annually on research and development activities related to product development until the first commercial sale of a product.

The following summarizes our long-term contractual obligations as of December 31, 2003 (in thousands):

		Payments due by period			
Contractual obligations	**Total**	**Less than 1 year**	**1 to 3 years**	**4 to 5 years**	**After 5 years**
Operating leases	$ 9,046	$ 1,571	$ 3,010	$ 2,205	$ 2,260
Equipment financing	1,923	845	1,052	26	—
Total[(1)]	$ 10,969	$ 2,416	$ 4,062	$ 2,231	$ 2,260

(1) Does not include commitments for product development spending under the Genetics Institute license agreement, as described above and does not include commitments for payment of the convertible promissory notes issued in October 2003.

We have financed the acquisition of laboratory and scientific equipment, furniture and fixtures, computer equipment and leasehold improvements through financing arrangements with various third parties. In connection with the financings, we have issued preferred stock warrants to the third parties. At December 31, 2003, we had

two financing arrangements. Under the first arrangement, we could borrow up to $1.7 million; however, borrowings under this arrangement were limited to $500,000 until we received additional funding acceptable to the lender. At December 31, 2003, we had $170,000 available under this outstanding arrangement, which expired in January 2004. Under the second arrangement, we can borrow up to $2.5 million. At December 31, 2003, we had $1.9 million available under the outstanding arrangement, which expires in April 2004 unless renewed. Outstanding borrowings under the current and previous financing arrangements were $1.9 million at each of the years ended December 31, 2002 and 2003. Outstanding borrowings require monthly principal and interest payments and mature at various dates through 2007. Interest rates applicable to the outstanding borrowings at December 31, 2003 range from 9.18% to 14.11%. Borrowings are secured by the acquired assets that have a net book value of $2.3 million at December 31, 2003. Under all agreements, we are required to comply with certain nonfinancial covenants.

We expect to use the net proceeds from this offering to fund clinical trial activities, manufacturing and preclinical research and development activities and for other general corporate purposes, including capital expenditures, technology acquisition and working capital to fund anticipated operating losses. See “Use of proceeds.”

Based on the current status of our product development and collaboration plans, we believe that the net proceeds of this offering, together with our cash, cash equivalents and investments, will be adequate to satisfy our capital needs through at least the end of the second quarter of 2005. However, we may need additional financing prior to that time to, among other things, support our product development for Phase II or Phase III clinical trials. Furthermore, we expect to require additional funding before we are able to generate revenue, if at all, from our potential products. Additional financing may not be available on favorable terms, if at all. If we are unable to raise additional funds when we need them, we may have to delay, reduce or eliminate some or all of our development programs or our clinical trials. We also may have to license technologies to others that we would prefer to develop internally.

Certain Relationships and Related Party Transactions

For a description of our related party transactions, see “Certain relationships and related party transactions.”

Recent Accounting Pronouncements

In June 2002, the FASB issued SFAS 146, *Accounting for Costs Associated with Exit or Disposal Activities*, which addresses accounting for restructuring, discontinued operation, plant closing or other exit or disposal activity. SFAS 146 requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. SFAS 146 is to be applied prospectively to exit or disposal activities initiated after December 31, 2002. We do not expect the adoption of SFAS 146 to have a material impact on our financial position or results of operations.

In November 2002, the FASB issued FIN 45, *Guarantor’s Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others, and Interpretation of FASB Statements No. 5, 57 and 107 and Rescission of FASB Interpretation No. 34*. FIN 45 clarifies the requirements of SFAS 5, *Accounting for Contingencies*, relating to a guarantor’s accounting for, and disclosure of, the issuance of certain types of guarantees. The disclosure provisions of FIN 45 apply to financial statements for the periods ending after December 15, 2002. However, the provisions for initial recognition and measurement apply on a prospective basis to guarantees that are issued or modified after December 31, 2002. We do not expect the adoption of FIN 45 to have a material impact on our financial position or results of operations.

In January 2003, the FASB issued FIN 46, *Consolidation of Variable Interest Entities*. FIN 46 clarifies the application of Accounting Research Bulletin No. 51, *Consolidated Financial Statements*, to entities in which the equity investors do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 applies immediately to variable interest entities created after January 31, 2003 and to variable interest

entities in which an enterprise obtains an interest after that date. It applies in the first fiscal year or interim period beginning after June 15, 2003 to variable interest entities in which an enterprise holds a variable interest that it acquired before February 1, 2003. FIN 46 applies to public enterprises as of the beginning of the applicable interim or annual period. We do not believe there will be a material effect on our financial condition or results of operations from the adoption of the provisions of FIN 46.

In November 2002, the Emerging Issues Task Force reached a consensus on Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables* (EITF Issue No. 00-21). This Issue provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. The provisions of EITF Issue No. 00-21 will apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003. We are currently evaluating the effect that the adoption of EITF Issue No. 00-21 will have on our financial statements.

In May 2003, the FASB issued SFAS 150, *Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity*. SFAS 150 establishes standards for how an issuer classifies and measures certain financial instruments with characteristics of both liabilities and equity. SFAS 150 requires that an issuer classify a financial instrument that is within SFAS 150's scope as a liability by reporting the cumulative effect of a change in accounting principle. The requirements of SFAS 150 apply to the first fiscal period beginning after December 15, 2004. We are currently evaluating the impact of adopting SFAS 150.

Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk

Our short-term investments as of December 31, 2003 consisted of $9.7 million in corporate bonds, $854,000 in municipal bonds, and $770,000 in federal agency obligations with contractual maturities of one year or less. Due to the short-term nature of our investments, we believe that our exposure to market interest rate fluctuations is minimal. The corporate bonds in which we invest are rated "A" or better by both Moody's and Standard and Poor's. Our cash and cash equivalents are held primarily in highly liquid money market accounts. A hypothetical 10% change in short-term interest rates from those in effect at December 31, 2003 would not have a significant impact on our financial position or on our expected results of operations. We do not currently hold any derivative financial instruments.

Because interest rates on our equipment financing obligations are fixed at the beginning of the repayment term, exposure to changes in interest rates is limited to new financings.

Foreign Currency Risk

For antibody development and supply services provided by Lonza, we must make payments denominated in British pounds. As a result, from time to time, we are exposed to currency exchange risks. We do not engage in currency hedging, and, if the British pound strengthens against the US dollar, our payments to Lonza will increase in US dollar terms. We have paid a total of $4.9 million to Lonza under our agreements with them as of December 31, 2003, consisting of approximately $1.7 million, $1.6 million and $1.3 million during the years ended December 31, 2001, 2002 and 2003, respectively. At December 31, 2003, we had no outstanding significant obligations or future contractual commitments to Lonza. However, we may elect to purchase additional antibodies from Lonza, in which case we would have to make payments in British pounds, exposing us to currency exchange risks in the future.

BUSINESS

Overview

We are a biotechnology company developing a new class of therapeutic products designed to enhance the body's natural immune responses to treat cancer, infectious diseases and other medical conditions associated with weakened immune systems. We derive our therapeutic products from a patient's own T cells, which are cells of the immune system that orchestrate immune responses and can detect and eliminate cancer cells and infected cells in the body. We use our patented and proprietary Xcellerate Technology to generate activated T cells, which we call Xcellerated T Cells, from blood that is collected from the patient. Activated T cells are T cells that have been stimulated to carry out immune functions. Our Xcellerate Technology is designed to rapidly activate and expand the patient's T cells outside of the body. These Xcellerated T Cells are then administered to the patient.

We believe, based on clinical trials to date, our Xcellerate Technology can produce Xcellerated T Cells in sufficient numbers to generate rapid and potent immune responses to treat a variety of medical conditions. In our ongoing clinical studies using our Xcellerate Technology, we have observed an increase in the quantity and a restoration of the diversity of T cells in patients with weakened immune systems. We plan to submit these findings to the FDA for review in our annual report. We believe we can efficiently manufacture Xcellerated T Cells for therapeutic applications. We expect Xcellerated T Cells may be used alone or in combination with other complementary treatments. We and other clinical investigators have completed or are conducting clinical trials in the following indications:

- ***Chronic lymphocytic leukemia, or CLL.*** In our ongoing Phase I/II clinical trial in CLL, treatment with Xcellerated T Cells resulted in a 50% to 100% reduction in the size of enlarged lymph nodes in 10 of 11 patients evaluated to date. In addition, there was a 50% or greater reduction in spleen size as measured below the rib cage by physical examination in all 10 of the patients with enlarged spleens. We plan to submit these findings to the FDA for review in our annual report.
- ***Multiple myeloma.*** In our ongoing Phase I/II clinical trial, we have shown that treatment with Xcellerated T Cells led to rapid recovery of T cells and lymphocytes in all 32 patients evaluated to date with multiple myeloma following treatment with high-dose chemotherapy and autologous stem cell transplantation. Previous independent clinical studies have demonstrated a correlation between patient survival and the speed of recovery of lymphocytes following treatment with chemotherapy and stem cell transplantation. Preliminary clinical results on the first 25 patients evaluated for tumor responses in our clinical trial have, in the majority of patients, documented a greater than 90% decrease in the tumor marker, which is used to measure disease. Additional follow-up will be required to determine the therapeutic effects of Xcellerated T Cells after transplant. In independent clinical trials, a greater than 90% decrease in the tumor marker has been associated with increased survival in multiple myeloma patients. We have also recently initiated a Phase II trial to treat patients who have advanced disease with Xcellerated T Cells without other anti-tumor therapy.
- ***Non-Hodgkin's lymphoma.*** In an independent clinical trial, conducted by one of our scientific founders under a physician-sponsored investigational new drug application, or IND, 16 non-Hodgkin's lymphoma patients undergoing high-dose chemotherapy and autologous stem cell transplantation were treated with T cells activated with an earlier version of our proprietary technology. As recently reported in a peer-reviewed journal, 8 out of these 16 patients with a very poor prognosis were still alive with a median follow-up of 33 months. We plan to initiate a Phase II clinical trial in the first half of 2004 in patients with non-Hodgkin's lymphoma who have failed prior therapies.
- ***Kidney cancer.*** In our completed Phase I clinical trial in 25 patients with metastatic kidney cancer, treatment with Xcellerated T Cells and low doses of the T cell activating agent,

interleukin-2, or IL-2, led to a median survival of 21 months. Previous independent clinical studies have demonstrated median survival of patients with metastatic kidney cancer of approximately 12 months. The results of this study were recently published in a peer-reviewed journal.

- ***Prostate cancer.*** In our recently completed Phase I/II clinical trial in prostate cancer, treatment with Xcellerated T Cells led to greater than 50% decreases in the serum tumor marker, prostate specific antigen, or PSA, in two out of 19 patients. In some independent clinical studies, decreases in PSA levels have been shown to correlate with increased patient survival.

- ***HIV.*** In an independent clinical trial, in HIV patients with low T cell counts, conducted by one of our scientific founders under a physician-sponsored IND, treatment with T cells activated using an earlier version of our proprietary technology increased the patient population's average T cell count to within normal levels and maintained this normal count for at least one year following therapy. The results of this study were recently published in a peer-reviewed journal. In several independent clinical studies, increased levels of T cells have been shown to correlate with increased patient survival and improved clinical outcome. In addition, Fresenius Biotechnology GmbH initiated a Phase I clinical trial under our collaboration to treat HIV patients with genetically-modified T cells produced using our Xcellerate Technology.

In clinical trials, we have observed few side effects in most patients. To date, in over 115 infusions of Xcellerated T Cells, we have had only two serious adverse events reportable to the FDA that were judged as possibly or probably related to the treatment. The first of these was a type of rash commonly associated with transplants that resolved following treatment. The second of these was congestive heart failure in a patient with pre-existing severe anemia that resolved approximately two hours following treatment. We subsequently amended our protocol to identify patients with anemia prior to administering Xcellerated T Cells. In general, side effects were similar to those observed with infusions of other kinds of cells, such as red blood cells or frozen cell products, and typically minor, including fever, chills, increased heart rate, nausea and sweating.

Based on these clinical results, we believe there are several important clinical opportunities for Xcellerated T Cells. We plan to initially focus our development efforts in those clinical indications that we believe have significant commercial opportunities and offer the most rapid path to regulatory approval. We believe hematological malignancies, including CLL, multiple myeloma and non-Hodgkin's lymphoma, represent major potential markets for Xcellerated T Cells. In addition, these types of cancer are generally incurable, which means that Xcellerated T Cells may qualify for fast track approval by the FDA, which could shorten the time to potential regulatory approval and commercialization. We plan to initiate one or more pivotal clinical trials in these hematological malignancies in 2005.

Background

T Cells and the Immune System

T cells are critically important to a properly functioning immune system. The immune system is responsible for protecting the body from foreign invaders and eliminating tumor cells and pathogens, including bacteria, viruses and fungi. Classically, the immune system is divided into two arms, known as humoral immunity and cell-mediated immunity. Humoral immune responses are mediated by antibodies, which several biopharmaceutical companies have developed into major commercial products to treat a range of diseases, including cancer, infectious diseases and autoimmune diseases. Cell-mediated immunity also plays a critical role in fighting many of these illnesses. T cells, the most common type of lymphocyte, play the central role in cell-mediated immunity. We believe T cells may be used to treat cancer, infectious diseases and autoimmune diseases.

Healthy individuals have a few hundred billion T cells that circulate throughout the body. Upon encountering tumor cells or pathogens, T cells become activated and recognize and eliminate them from the body. They do this

by performing several important functions. First, T cells stimulate many other components of the immune system that are required for effective immune responses. For example, activated T cells control the proliferation and differentiation of other lymphocytes, B cells, which make antibodies that help fight infections. Additionally, activated T cells recognize and mark abnormal cells, such as tumor cells or infected cells, for destruction by the immune system. Activated T cells also participate directly in killing tumor cells and infectious agents, such as viruses.

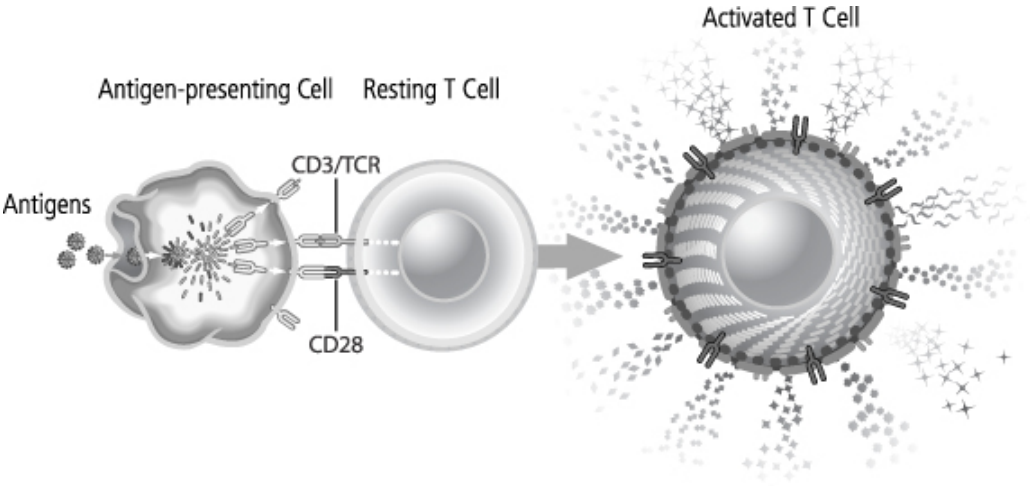
Every T cell carries its own distinct receptor, the T cell receptor, which is capable of recognizing a specific antigen. Antigens are substances produced by tumor cells, viruses, bacteria or other pathogens that cause disease and may be distinguishable from substances produced by healthy cells. Healthy individuals have a population of T cells that expresses millions of different T cell receptors. It is this broad spectrum of T cell receptors that provides the diverse T cell repertoire that makes it possible for the immune system to recognize and respond to a wide variety of harmful pathogens that cause disease.

Activation of T Cells

T cells remain in a resting state until they become activated upon encountering antigens expressed by infected cells or tumor cells. Although activation depends on the specificity of binding of an antigen to a T cell receptor, all T cells display similar characteristics upon activation. For example, when T cells undergo activation, they become more sensitive to stimulation by antigens. This makes activated T cells especially effective at eradicating pathogens that would otherwise escape recognition from the immune system. In addition, upon activation, T cells rapidly multiply to large numbers in the body. Accordingly, it is the process of activation that makes T cells potent therapeutic agents.

Two signals are required to activate T cells, Signal 1 and Signal 2, which are delivered by two molecules, CD3 and CD28, present on the surface of T cells. Signal 1 occurs when the CD3 molecule, which is tightly associated with the T cell receptor, is stimulated by engagement of the receptor by an antigen taken up, processed and presented by an antigen-presenting cell. Signal 2 occurs when the same antigen-presenting cell engages the CD28 molecule on the T cell. When the CD3 and CD28 molecules are stimulated, T cells become activated and produce an immune response. If only Signal 1 is generated, T cells are only partially activated and die quickly. If only Signal 2 is generated, no immune response occurs at all. Only the simultaneous delivery of both Signal 1 and Signal 2 generates activated T cells that can function properly in the body and survive for prolonged periods.

When a T cell becomes activated, it produces a number of different molecules to carry out its many functions. Some of these molecules, known as cytokines, are secreted by the T cell while other molecules are expressed on the surface of the T cell. Many of these molecules activate other cellular elements of the immune system. The activated T cell also produces several toxic substances that are responsible for directly killing pathogens. Several different molecules that a T cell produces in proper amounts work together to generate an effective immune response. Many of these molecules are extremely potent and would be extremely toxic if they were administered intravenously or by other routes that allow them to circulate throughout the body. The activated T cell is able to control the production and site of delivery of these molecules in order to generate a safe immune response that is concentrated at the site of disease.



The Dangers of T Cell Deficiencies

The quantity, quality and diversity of T cells are critically important for a properly functioning immune system.

- ***Quantity.*** A variety of treatments for cancer and autoimmune diseases destroy T cells, including chemotherapy, radiation and some monoclonal antibodies. In addition, many diseases, such as HIV and several kinds of congenital immunodeficiencies, are associated with low numbers of T cells. When the number of T cells decreases significantly, the human immune system is less able to defend the body against cancer and infectious diseases.
- ***Quality.*** In many diseases, such as cancer and HIV, T cells have a reduced ability to generate effective immune responses. Many chemotherapy drugs and immunosuppressive agents also depress the activity and function of T cells. Defective T cells may not be able to respond to normal signals required for an effective immune response. These T cells may produce insufficient numbers of molecules required either to mark tumor cells for destruction or to directly destroy them.
- ***Diversity.*** A decreased diversity of T cell receptors is observed in many diseases, including cancer, HIV and autoimmune diseases. This decreased spectrum of T cell receptors narrows the ability of T cells to recognize a broad array of antigens. This may reduce a patient's ability to respond to and eliminate cancer and infectious diseases.

In many patients, decreases in the quantity, quality and diversity of T cells occur together. This puts patients at an increased risk of developing serious and often life-threatening infectious diseases as well as cancer. For example, patients with autoimmune diseases treated with immunosuppressive drugs have an increased risk of infections. Additionally, transplant patients treated with similar drugs have an increased risk of infections and non-

Hodgkin's lymphoma. Patients with HIV have an increased risk of developing non-Hodgkin's lymphoma and multiple myeloma. Patients with certain types of congenital immunodeficiencies have an increased risk of developing infections as well as non-Hodgkin's lymphoma and gastric cancer. In each of these medical conditions, patients often have poorly functioning T cells that are reduced in number and have limited diversity, which makes these patients particularly susceptible to infection and cancer.

Conversely, the presence of a sufficient number of healthy T cells is associated with improved therapeutic outcome in patients with cancer, HIV and autoimmune diseases. At the time of diagnosis, patients with non-Hodgkin's lymphoma who have higher lymphocyte counts have better survival. Several recent independent clinical studies have shown that cancer patients who experience more rapid and complete recovery of lymphocytes after chemotherapy have improved survival and clinical outcome. Improved prognosis has been well documented in HIV patients whose T cell counts significantly increased after anti-HIV therapy. These patients demonstrate improvements in T cell function as well as in T cell receptor repertoire diversity after successful treatment. Restoring healthy T cell diversity has also been associated with remission of disease in patients with certain autoimmune diseases.

Current Approaches to Activate the Immune System and Their Limitations

There has been a major clinical focus on developing therapeutic agents to strengthen and activate a patient's immune system. Many of these agents are used to activate the patient's T cells inside the body. These therapeutic agents include:

- ***Cytokines.*** Cytokines, such as IL-2, are potent chemical messengers produced by the immune system that stimulate T cells and generate an immune response. Although cytokines have demonstrated therapeutic effects in cancer and infectious diseases, they are associated with serious and sometimes life-threatening side effects when administered to patients. In order to reduce adverse effects, these drugs are often given at decreased doses, which may compromise their therapeutic effects.
- ***Monoclonal antibodies.*** A variety of different monoclonal antibodies are being developed that target molecules expressed on the surface of T cells. Some of these target molecules activate T cells, while others inhibit T cell activation. By blocking the molecules that inhibit T cell activation, T cell activity can be increased. These antibodies have demonstrated limited therapeutic activity, and some of these molecules have been associated with serious side effects due to overactive T cells.
- ***Adjuvants.*** Other therapeutic agents known as adjuvants have also been developed to stimulate immune responses. Some of the most potent adjuvants are derived from bacteria that make a variety of molecules that stimulate immune responses. Adjuvants are used for some clinical applications, but their use is limited due to toxicity. Recently, several of the molecules produced by bacteria that activate the immune system have been identified, and some are being developed as immunotherapeutic agents. However, it is unclear whether these individual molecules will retain the therapeutic effects of whole adjuvants.
- ***Vaccines.*** A number of different vaccines are under development to treat cancer and HIV. These vaccines are made up of antigens expressed by tumor cells or HIV and are often administered with adjuvants. Patients are treated with the goal of stimulating T cells to respond to antigens, so that the T cells become activated and destroy the cancer or virus. However, many patients with cancer or HIV have deficiencies in the quantity, quality or diversity of their T cells, which may limit their ability to generate an effective response to the vaccine. This may be one reason vaccines have been ineffective in treating cancer and HIV.
- ***Dendritic cells.*** Cells of the immune system known as dendritic cells are being used to stimulate immune responses in patients with cancer. In healthy individuals, dendritic cells deliver both Signal 1 and Signal 2, which activate T cells. For most clinical applications, a

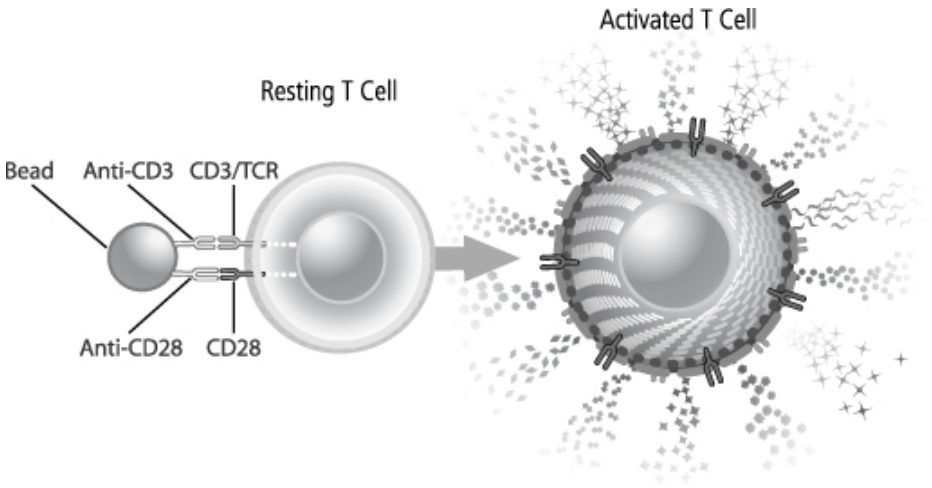
patient's own dendritic cells are grown outside of the body and then administered back to the patient. However, the ability to generate dendritic cells varies from patient to patient. Recently, it has been documented that dendritic cells under some circumstances may also make molecules that inhibit T cell responses. In addition, many patients with cancer or HIV have T cell deficiencies, which may limit their ability to respond to dendritic cells. Accordingly, dendritic cells may be limited in their ability to activate patients' T cells and generate effective immune responses.

Activated T cells generated using other methods. To overcome the limitations of activating T cells inside of the body, researchers have attempted to activate and grow patients' T cells *ex vivo*, or outside of the body, before administering them for therapeutic applications. The development of monoclonal antibodies, which are proteins derived from a single clone of antibody-producing cells that bind to well-defined targets, made it possible to develop reagents that bind to the CD3 molecule and deliver Signal 1 to T cells. These antibodies are used to activate and grow T cells outside of the body. However, the process generates only one of the two signals required to activate T cells. Without Signal 2, this results in limited activity, growth and survival of T cells in the laboratory as well as after their administration into patients. Some recent approaches use antigens to target T cell receptors to generate antigen-specific T cells. However, these approaches result in a restricted T cell response that may not be effective for many clinical applications requiring broader T cell responses.

Our Solution

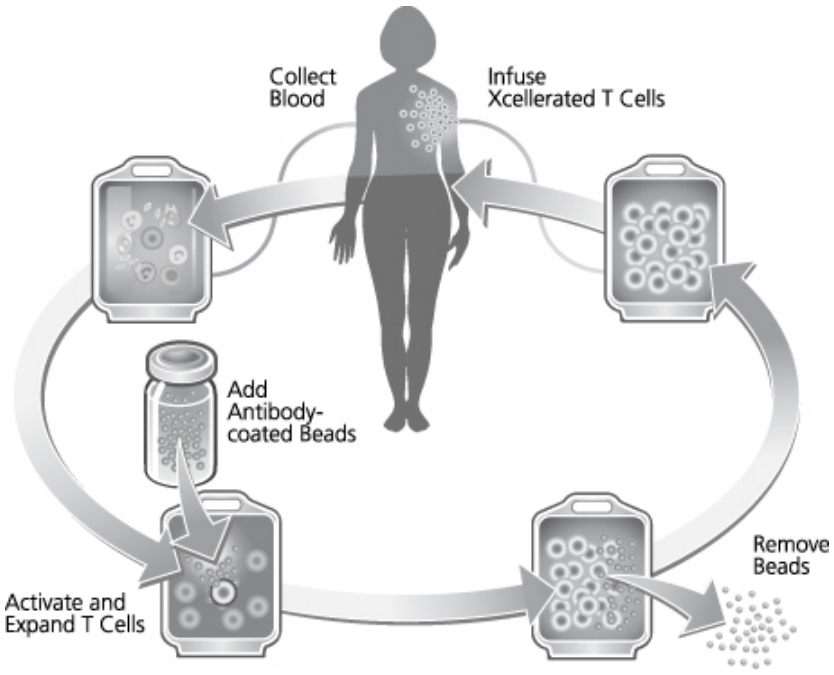
Our Therapeutic Approach

We have developed our patented and proprietary Xcellerate Technology, which can be used to consistently activate and grow large numbers of T cells outside of the body for therapeutic applications. The cells generated with this process, which we call Xcellerated T Cells, have been observed to have the broad diversity of T cell receptors that we believe are required to recognize and eliminate cancer and infectious diseases. These activated T cells secrete a wide spectrum of molecules, such as cytokines, and express a broad range of molecules on their cell surfaces to generate an effective immune response. In addition, T cells generated using an earlier version of our proprietary technology have been shown to survive for more than one year after infusion in patients. We believe the long-term survival of these cells may lead to sustained therapeutic responses.



Our patented Xcellerate Technology is used in a process that employs magnetic beads, which are plastic-coated magnetic microspheres, densely covered with two monoclonal antibodies that deliver Signal 1 and Signal 2 to activate T cells. One of the monoclonal antibodies delivers Signal 1 to T cells by binding directly to the CD3 molecule. Our Xcellerate Technology also uses another monoclonal antibody that binds to the CD28 molecule to deliver Signal 2 to T cells. We attach both of these monoclonal antibodies to the surface of magnetic beads. When T cells bind to the monoclonal antibodies on these magnetic beads, they become activated and significantly increase in number. We believe these magnetic beads can provide the signals required to activate and grow a broad spectrum of T cells characterized by a diverse T cell receptor repertoire. These Xcellerated T Cells are then administered to the patient with the goal of restoring the health of the patient's immune system and ability to eliminate cancer and infectious diseases.

To produce Xcellerated T Cells, white blood cells, a rich source of T cells, are first collected from a patient's blood in an outpatient clinical setting using a standard procedure called leukapheresis. These cells are sent to our cGMP manufacturing facility, where they are frozen and stored. When needed, the cells are thawed and processed in a closed system to avoid exposure to the outside environment, reducing the risk of microbial contamination. In this process, the patient's white blood cells are mixed with our microscopic magnetic beads and then placed in a sterile, custom disposable bioreactor containing a solution of nutrients and a low level of IL-2 that sustains the growth of the T cells. These beads are covered with our two monoclonal antibodies, which deliver Signal 1 and Signal 2 to activate the T cells in the solution. During an approximately 10-day period after the application of the beads, the T cells become activated and rapidly increase in number. At the end of this period, the antibody-coated magnetic beads are substantially removed with a magnetic device. The Xcellerated T Cells are then frozen for increased shelf life. We have documented that we can store the Xcellerated T Cells in a frozen state for at least 12 months without significant loss of activity. When requested by the physician, the frozen Xcellerated T Cells are shipped to the outpatient clinic where they are thawed and administered by intravenous infusion in approximately two hours.



For purposes of safety and regulatory compliance, we have established procedures designed to track patients' cells during the manufacture and shipment of Xcellerated T Cells. Each patient receives a unique identifying number that also contains a code for the clinical site where they are being treated. This unique identifying number is used to track, monitor and record all documentation, labels and materials relating to the production of the patient's Xcellerated T Cells from blood collection through infusion of the final product. Before the product is shipped to the clinical site, we conduct quality control procedures in our laboratory. These procedures are designed to assure that Xcellerated T Cells meet strict quality control criteria such as T cell purity, dosage, potency, safety and sterility.

Benefits of Xcellerated T Cells

We believe Xcellerated T Cells may be an effective treatment for cancer and infectious diseases and may have the following clinical benefits:

- ***Increased T cell quantity.*** Using our Xcellerate Technology, we have documented the activation and growth of more than 100 billion T cells, representing a 100-fold to 300-fold increase in T cells during the manufacturing process. The results of this process were published in the peer-reviewed *BioProcessing Journal* in November 2003. One hundred billion T cells represents approximately 25% to 30% of the total number of T cells found in healthy individuals. We believe this number of Xcellerated T Cells is sufficient to generate therapeutic effects in patients with cancer, infectious diseases and autoimmune diseases. In our ongoing Phase I/II clinical trial in multiple myeloma, we already have evidence that treatment with Xcellerated T Cells leads to rapid T cell and lymphocyte recovery in patients treated with high-dose chemotherapy and autologous stem cell transplantation.
- ***Prolonged T cell survival.*** In an independent clinical trial, T cells activated using an earlier version of our proprietary technology have been documented to survive in the body for more than a year after their administration. We believe the prolonged survival of Xcellerated T cells may enable less frequent administration than existing therapeutic products for cancer and infectious diseases.
- ***Improved T cell quality.*** We have documented that Xcellerated T Cells produce a broad spectrum of cytokines and express many important surface molecules required to generate an effective immune response. In laboratory studies, our Xcellerate Technology has been used to restore healthy immune responses in T cells from patients with leukemia activated and grown using our Xcellerate Technology. These Xcellerated T Cells have been shown in the laboratory to mark patients' leukemic cells for destruction by the immune system. We have also observed that the Xcellerated T Cells can directly kill the patients' tumor cells. In our ongoing Phase I/II clinical trial in CLL, treatment with Xcellerated T Cells resulted in a 50% to 100% reduction in the size of enlarged lymph nodes in 10 of 11 patients evaluated and a 50% or greater reduction in spleen size as measured below the ribcage by physical examination in all 10 of the patients with enlarged spleens. We plan to submit these findings to the FDA for review in our annual report.
- ***Broadened T cell diversity.*** We have observed the generation of T cells with broad variety of T cell receptors using our Xcellerate Technology. We have shown in the laboratory that our Xcellerate Technology can be used to significantly broaden the diversity of the narrow T cell repertoire found in many cancer patients. In laboratory studies, one of our scientific founders has independently demonstrated similar results in a clinical trial in HIV patients. In our Phase I/II ongoing clinical trial in multiple myeloma, we have preliminary evidence that Xcellerated T Cells can be used to restore a broad T cell repertoire after administration into patients.
- ***Favorable side effect profile.*** Xcellerated T Cells are produced from T cells originating from the patient. We believe that using a patient's own cells may result in a safer product than chemotherapy drugs. Xcellerated T Cells and T cells generated using an earlier version of our

proprietary technology have been administered to over 170 patients in clinical trials. We have observed few side effects in most patients. The side effects associated with administration of Xcellerated T Cells are typically minor and similar to those observed with infusions of other kinds of cells, such as red blood cells or frozen cell products. To date, there have been only two serious adverse events reportable to the FDA that were judged as possibly or probably related to the therapy, both of which were resolved. The first of these was a type of rash commonly associated with transplants that resolved following treatment. The second of these was congestive heart failure in a patient with pre-existing severe anemia that resolved approximately two hours following treatment. We subsequently amended our protocol to identify patients with anemia prior to administering Xcellerated T Cells.

- ***Complementary to other therapies.*** Based on our clinical observations to date, we believe Xcellerated T Cells may be complementary to current therapies, such as chemotherapy, radiation and monoclonal antibodies. Xcellerated T Cells may help repair the damage to the immune system caused by chemotherapy or other drugs that suppress the immune system. In addition, we believe Xcellerated T Cells may be combined with anti-viral drugs as well as therapies that activate the immune system, such as cancer vaccines. We and other clinical investigators have performed both preclinical animal studies as well as laboratory studies using patients' tissues demonstrating the feasibility of using this approach to improve the potential efficacy of combining T cells activated with our proprietary technology with cancer vaccines.

Benefits of Our Xcellerate Technology

We believe our Xcellerate Technology may have the following benefits:

- ***Ex vivo process.*** We designed our Xcellerate Technology to be used outside of the body. This allows us to grow and monitor Xcellerated T Cells in a controlled environment where we can provide optimal conditions for the activation and growth of T cells.
- ***Broad clinical applications.*** Based on recent clinical trials, we believe our Xcellerate Technology can be applied to a variety of diseases. We have demonstrated in the laboratory as well as in our cGMP manufacturing facility that our Xcellerate Technology can be used to activate and grow T cells from patients with a variety of cancers, including kidney cancer, prostate cancer, non-Hodgkin's lymphoma, multiple myeloma and leukemia. Other clinical investigators have used an earlier version of our proprietary technology to activate and grow T cells from HIV patients for clinical applications. In addition, we recently entered into a collaboration under which Fresenius Biotechnology GmbH will treat HIV patients with genetically-modified T cells produced using our Xcellerate Technology. One patient has been enrolled to date in a recently initiated Phase I clinical trial under this collaboration. Recently, we have demonstrated in the laboratory that we can use our Xcellerate Technology to activate and grow T cells from patients with autoimmune diseases, including rheumatoid arthritis, systemic lupus erythematosus and scleroderma.
- ***Ease of administration.*** We initially collect a patient's white blood cells, a rich source of T cells, in a standard outpatient procedure called leukapheresis. After our process is completed, Xcellerated T Cells are administered in approximately two hours using a routine intravenous procedure in an outpatient clinic. This is similar to what is performed today in most oncology practices where chemotherapy, monoclonal antibodies and red blood cell transfusions are administered intravenously.
- ***Reproducible and cost-effective manufacturing.*** We use the same standardized process to produce Xcellerated T Cells for all patients. Other than our proprietary components, our Xcellerate Technology incorporates commercially available products and standard clinical and blood bank supplies, which enables us to efficiently manufacture Xcellerated T Cells. We do not require materials that must be obtained by surgery, such as samples of the patient's tumor. We can freeze the cells we initially collect from our patients as well as freeze the Xcellerated

T Cells we generate from those cells. We have documented storage of Xcellerated T Cells in our facility for at least 12 months without significant loss of activity. Freezing may enable us to generate several Xcellerated T Cell treatments from one manufacturing procedure. In addition, we believe freezing should allow us to supply Xcellerated T Cells to patients throughout the United States from a central manufacturing site.

Our Strategy

Our goal is to be a leader in the field of T cell therapy and to leverage our expertise in T cell activation to develop and commercialize products to treat patients with cancer, infectious diseases, autoimmune diseases and compromised immune systems. Key elements of our strategy include the following:

- ***Maximize speed to market.*** We plan to initiate one or more pivotal clinical trials in CLL, multiple myeloma or non-Hodgkin's lymphoma in 2005. We believe these clinical indications provide the most rapid and cost-effective commercialization strategy for Xcellerated T Cells. We believe that focusing on life-threatening diseases can facilitate rapid entry into the market for Xcellerated T Cells. The FDA has adopted fast track approval and priority trial procedures for therapies that address life-threatening diseases, and we may apply for fast track designation. In addition, we intend to apply for FDA orphan drug status for Xcellerated T Cells for those cancers that qualify, including CLL, multiple myeloma and kidney cancer.
- ***Expand the application of Xcellerated T Cells.*** In addition to cancer and HIV, we believe Xcellerated T Cells can be used to treat patients with other illnesses, including infectious diseases, such as hepatitis. In addition, we are studying the potential therapeutic benefits of Xcellerated T Cells in patients with autoimmune diseases treated with immunosuppressive drugs and in patients with compromised immune systems, such as those with congenital immunodeficiencies. We may also expand the application of Xcellerated T Cells to other types of cancer. We are also exploring the use of Xcellerated T Cells in patients with autoimmune diseases who have been treated with immunosuppressive drugs. In addition to our own clinical trials, our scientific founders are conducting a number of independent clinical studies using an earlier version of our proprietary technology for additional clinical applications. Based on the results of their studies, we may pursue some of these clinical opportunities using Xcellerated T Cells.
- ***Leverage complementary technologies and therapies.*** Xcellerated T Cells may be effective in combination with current treatments for cancer and infectious diseases, such as chemotherapy. We believe Xcellerated T Cells may help ameliorate the effects of immunosuppression associated with treatment of autoimmune diseases. We also intend to explore opportunities to combine complementary technologies and therapies, such as cancer vaccines and monoclonal antibodies, with Xcellerated T Cells. In addition, we may supplement our internal efforts by acquiring or licensing technologies and product candidates that complement our Xcellerate Technology.
- ***Retain selected U.S. commercialization rights in cancer.*** We intend to retain marketing and commercialization rights in North America for products in specialized markets, such as cancer. We may seek development and marketing support for clinical indications that have broader patient populations in North America. In addition, we plan to pursue strategic partnerships with biopharmaceutical companies to obtain development and marketing support for territories outside North America, such as Europe and Asia.
- ***Enhance manufacturing capabilities.*** We have a major focus on developing an efficient and cost-effective process to manufacture Xcellerated T Cells. We currently produce T cells for clinical trials using a cost-effective process that is readily scaleable. We intend to make additional improvements to our manufacturing procedures and components, which should further reduce the costs of manufacturing. In addition, we plan to optimize our manufacturing process for other disease indications in the future.

- ***Expand and enhance our intellectual property.*** We have a portfolio of issued patents and patent applications that we own or exclusively license, which we believe provides patent coverage for our Xcellerate Technology. As we continue to improve our Xcellerate Technology, including developing process improvements and improving the activity and the specificity of Xcellerated T Cells, we intend to file patents to protect these improvements.

Clinical Applications

The table below summarizes the current status of clinical trial applications that use our proprietary technology:

Disease and indication	Clinical trial status	Sponsor	# of patients treated/planned
Cancer—Hematological malignancies			
CLL			
· Progressive disease	Ongoing Phase I/II	Xcyte	14/18
· Post-Campath	Planned Phase II	Xcyte	—
Multiple myeloma			
· Post-autologous stem cell transplant	Ongoing Phase I/II	Xcyte	36/36
	Ongoing Phase I/II	Physician	40/40
· Relapsed	Ongoing Phase II	Xcyte	1/30
Non-Hodgkin's lymphoma	Completed Phase I	Physician	16/16
	Planned Phase II[1]	Xcyte	—
Cancer—Solid tumors			
Kidney cancer	Completed Phase I/II	Xcyte	25/25
Prostate cancer	Completed Phase I/II	Xcyte	19/20
HIV	Completed Phase I	Physician	8/8
	Ongoing Phase I[2]	Fresenius	—
	Ongoing Phase II	Physician	12/24

[1] We plan to initiate this Phase II clinical trial with 40 patients in the first half of 2004.
[2] One of the 10 planned patients has been enrolled in this Phase I clinical trial.

Cancer

The American Cancer Society estimated that there would be 1.3 million new cases of cancer in the United States in 2003. Many cancer patients are treated with chemotherapy drugs, which often have limited efficacy and are associated with severe and sometimes life-threatening side effects. Physicians have recently begun to recognize the important role that the immune system may play in controlling cancer. As a result, immune-based therapeutic products, such as monoclonal antibodies, have become important drugs used to treat patients with cancer. These therapeutic products have become more widely used not only because of their efficacy, but also because they are generally better tolerated than chemotherapy.

Hematological Malignancies

Hematological malignancies are cancers of the blood or bone marrow. The American Cancer Society estimated that there would be approximately 106,200 new cases of hematological malignancies in the United States in 2003. Hematological malignancies include leukemia, non-Hodgkin's lymphoma, multiple myeloma and Hodgkin's lymphoma. Because hematological malignancies have usually spread throughout the body by the time of diagnosis, they typically require treatment with chemotherapy. Recently, immune-based therapeutic products

have been developed to treat some hematological malignancies. Most kinds of hematological malignancies, including CLL, multiple myeloma and the vast majority of non-Hodgkin's lymphomas, are cancers of lymphocytes known as B cells. In healthy individuals, T cells control the proliferation of B cells. However, in patients with B cell malignancies, T cells are abnormal, and this may contribute to uncontrolled B cell proliferation and tumor progression.

CLL

- ***Background.*** According to third party sources, approximately 73,000 patients have CLL in the United States, and there would be 7,300 new cases of CLL and 4,400 deaths due to this disease in the United States in 2003. The disease is characterized by proliferation of malignant lymphocytes in the bone marrow, lymph nodes and spleen, which leads to an increase in white blood cell counts, as well as enlarged lymph nodes and spleens in most patients. A number of chemotherapy drugs can be used to treat leukemia. Recently, the FDA approved two drugs, fludarabine, a chemotherapy agent, and Campath, a monoclonal antibody, to treat CLL. These drugs are effective in some patients but do not cure the disease. Both fludarabine and Campath are powerful drugs that destroy all lymphocytes, including those that are normal as well as malignant. Consequently, patients treated with these drugs suffer from severe T cell deficiencies, which increase the risk of infection.

- ***Clinical data.*** In 2003, we began treating patients with CLL with a single infusion of Xcellerated T Cells with no other therapy in a Phase I/II clinical trial. The National Institutes of Health awarded us an SBIR grant of approximately $1.2 million to help fund this trial. We are treating a minimum of three patients at each of three different dose levels of 10, 30 and 60-100 billion Xcellerated T Cells and a total of approximately 18 patients in this clinical trial. Serious injury has sometimes occurred with other therapeutic agents used to treat CLL due to rapid destruction of leukemic cells. To reduce this risk, we started with a low dose in this trial and have gradually increased the dose of Xcellerated T Cells. A total of 14 patients have been treated to date. We have observed few side effects in most patients. To date, we have reported one serious adverse event to the FDA for this trial. The event was reported as unlikely related to the therapy. In addition, we have documented a 50% to 100% reduction in the size of enlarged lymph nodes in 10 of 11 patients evaluated and a 50% or greater reductions in spleen size as measured below the ribcage by physical examination in all 10 of the patients with enlarged spleens. To date, we have not observed any significant decrease in leukemia counts in the blood of these patients. We plan to submit these findings to the FDA for review in our annual report.

We plan to initiate a randomized, Phase II clinical trial in which patients will be treated with Campath with or without subsequent treatment with Xcellerated T Cells. Use of Campath is a standard treatment for CLL but increases the risk of infection in part because Campath eradicates nearly all T cells for several months following treatment. In addition, although Campath can decrease leukemic cell counts in the blood, it has less therapeutic activity in the lymph nodes and spleens of CLL patients. Accordingly, we believe there is a strong clinical rationale for combining Xcellerated T Cells with Campath.

Multiple Myeloma

- ***Background.*** Multiple myeloma is a form of cancer that usually originates in the bone marrow and has metastasized to multiple bone sites by the time of diagnosis. According to third-party sources, approximately 45,000 patients have multiple myeloma in the United States, approximately 14,600 new patients will be diagnosed with multiple myeloma and 10,900 patients will die of the disease in the United States in 2003. Chemotherapy has been the most common form of treatment for multiple myeloma. More recently, physicians started using drugs such as Velcade and thalidomide to treat this disease. These drugs can temporarily reduce the tumor load in patients with myeloma but only rarely eradicate the disease. The most

effective therapeutic approach for treatment of multiple myeloma is high-dose chemotherapy followed by autologous stem cell transplantation. However, this therapy is not curative, and only approximately 25% of patients achieve a complete response. In addition, patients whose lymphocyte counts recover slowly after transplant have a poor clinical outcome. We believe that administering Xcellerated T Cells may be able to accelerate lymphocyte recovery and improve the clinical outcome of these patients.

- ***Clinical data.*** We recently completed treatment of all 36 of the planned patients in an ongoing Phase I/II clinical trial in patients with multiple myeloma. Patients received a single infusion of Xcellerated T Cells three days following high-dose chemotherapy and autologous stem cell transplantation. Treatment with Xcellerated T Cells has resulted in few side effects in most patients and two serious adverse events reportable to the FDA. Of these two events only one, which involved a patient who developed a rash after treatment that subsequently resolved, was judged to be possibly or probably related to the therapy. Lymphocyte recovery and T cell recovery in all 32 patients evaluated to date has been much more rapid than observed in a comparable group of patients who did not receive Xcellerated T Cells after stem cell transplantation. Rapid lymphocyte recovery has been correlated with improved prognosis and increased survival in previous independent clinical studies. Additionally, we and others have demonstrated that the diversity of the T cell receptor repertoire is often extremely limited in patients with multiple myeloma. In our clinical trial, the T cell receptor repertoire demonstrated a normal pattern in four of the first five evaluable patients by four weeks after stem cell transplantation. In contrast, in multiple myeloma patients who do not receive Xcellerated T Cells, it typically takes more than a year for the limited T cell receptor repertoire to return to normal after transplant. We believe the improvements in the time to lymphocyte recovery and diversity of the T cell repertoire may lead to a better clinical outcome in these patients. We are currently monitoring these patients for infections, days in hospital and other clinical parameters that may be associated with immune recovery. Preliminary clinical results on the first 25 patients evaluated for tumor responses in our clinical trial have, in the majority of patients, documented a greater than 90% decrease in the tumor marker, which is used to measure disease. Additional follow-up will be required to determine the therapeutic effects of Xcellerated T Cells after transplant. In independent clinical trials, a greater than 90% decrease in the tumor marker has been associated with increased survival in multiple myeloma patients.

  In an ongoing independent Phase I clinical trial, one of our scientific founders and his collaborators have treated 40 multiple myeloma patients with activated T cells following high-dose chemotherapy and autologous stem cell transplantation. These patients received T cells activated using an earlier version of our proprietary technology. Administration of activated T cells resulted in few side effects in most patients and was associated with rapid lymphocyte and T cell recovery. In addition, tumor responses have been documented in a majority of these patients.

We recently initiated a Phase II clinical trial in multiple myeloma in which we plan to enroll approximately 30 patients who have failed prior therapies. Patients in this trial are randomized to treatment with either a single infusion of Xcellerated T Cells alone or treatment with the drug fludarabine followed by a single infusion of Xcellerated T Cells. This trial is designed to evaluate whether treatment with Xcellerated T Cells is effective as a stand-alone therapy and whether fludarabine can enhance the anti-tumor effects of Xcellerated T Cells in patients with multiple myeloma. To date, we have treated one patient in this trial.

Non-Hodgkin's Lymphoma

- ***Background.*** Non-Hodgkin's lymphoma is a cancer that originates in the lymph nodes of the body. According to third-party sources, approximately 300,000 patients have non-Hodgkin's lymphoma, and approximately 53,000 new patients were diagnosed with this disease in the

United States in 2003. About 60% of newly diagnosed patients have an aggressive disease course, while approximately 40% of patients have a slow growing, low-grade form of the disease. Chemotherapy and radiation are used to treat patients with non-Hodgkin's lymphoma. More recently, immune-based therapeutic products, such as the monoclonal antibody Rituxan, have increasingly been used alone or in combination with chemotherapy. Patients with low-grade lymphoma often respond to Rituxan treatment, but they cannot be cured with any form of therapy. These patients eventually become refractory to all forms of therapy and die from their disease. Patients with aggressive non-Hodgkin's lymphoma may be cured with chemotherapy treatment. However, most patients relapse or fail to respond to therapy and have a poor prognosis. Some of these patients may be treated with high-dose chemotherapy followed by an autologous stem cell transplant, but there are few patients with long-term survival.

- ***Clinical data.*** An independent clinical trial was conducted by one of our scientific founders under a physician-sponsored IND application with the FDA in 16 non-Hodgkin's lymphoma patients with aggressive disease and a poor prognosis. The patients were treated with high-dose chemotherapy and an autologous stem cell transplant followed by administration of a single infusion of activated T cells generated using an earlier version of our proprietary technology. As reported in the medical journal *Blood* in September 2003, 8 out of these 16 patients with a very poor prognosis were still alive with a median follow-up of 33 months.

We believe administration of Xcellerated T Cells may increase the lymphocyte counts of patients with low-grade lymphoma. Recent studies have demonstrated a correlation between lymphocyte counts in patients with low-grade lymphoma and their survival. In addition, low-grade lymphoma has many similar characteristics to CLL. However, in contrast to CLL, tumor cells are rarely found on routine examination of the blood in patients with lymphoma. The primary site of disease in patients with low-grade lymphoma is the lymph nodes. Based on the effects that we have documented in the lymph nodes in patients with CLL, we plan to initiate a Phase II clinical trial in the first half of 2004 to test whether Xcellerated T Cells can be used to treat patients with low-grade lymphoma.

Solid Tumors

Solid tumors are cancers that originate in organs of the body. The American Cancer Society estimated that there would be over one million new patients with solid tumors, such as breast, prostate, kidney, lung, liver and colon cancers and approximately 500,000 people would die from these types of cancers in the United States in 2003. These cancers are typically treated with surgery or radiation. Chemotherapy is used with limited success in treating solid tumors such as breast cancer, but it is generally ineffective in curing patients once the cancer has spread or metastasized. Recently, immune-based therapeutic products, including monoclonal antibodies, such as Herceptin, are being used to treat patients with solid tumors, such as breast cancer and ovarian cancer.

Kidney Cancer

- ***Background.*** The American Cancer Society estimated that approximately 31,900 patients would be diagnosed with kidney cancer in the United States in 2003. Approximately one-third of the patients with kidney cancer will develop metastatic disease. Once patients develop metastatic disease, they have a very poor prognosis with an average survival of approximately one year. According to third-party sources, the five-year survival for patients with metastatic kidney cancer is less than 5%, and approximately 12,000 deaths were expected to occur in the United States in 2003. The only drug currently approved by the FDA for treating metastatic kidney cancer is IL-2, a cytokine that activates T cells and increases lymphocyte counts. However, the FDA-approved regimen requires extremely high doses of IL-2, which are associated with serious and life-threatening side effects. Several recent clinical studies have demonstrated a strong correlation between the increase in lymphocyte counts that occurs with IL-2 therapy and clinical outcome in patients with metastatic kidney cancer. We believe

administration of Xcellerated T Cells may improve the clinical outcome in these patients by boosting lymphocyte counts.

- ***Clinical data.*** In February 2003, we completed a Phase I/II clinical trial of Xcellerated T Cells in 25 patients with metastatic kidney cancer. In this clinical trial, patients were treated with two infusions of Xcellerated T Cells approximately four weeks apart. After each infusion of Xcellerated T Cells, patients were treated with low doses of IL-2. We observed few side effects in most patients and no serious adverse events reportable to the FDA related to the therapy. We also observed the complete elimination of detectable bone metastases in two patients. Furthermore, there was a statistically significant increase in lymphocyte counts with treatment, and there was an increase in post-infusion survival in patients achieving higher lymphocyte counts. The median survival in these patients was 21 months. Several independent clinical trials have shown that the median survival in patients with metastatic kidney cancer is approximately 12 months. The results of our clinical trial were reported in the medical journal *Clinical Cancer Research* in September 2003.

We are evaluating the feasibility of a pivotal clinical trial in kidney cancer. We are also evaluating partnership opportunities to support further development of this clinical indication.

Prostate Cancer

- ***Background.*** Prostate cancer is the most common form of cancer in men in the United States. The American Cancer Society estimated that there would be 220,900 new cases and approximately 28,900 patients would die of prostate cancer in the United States in 2003. Patients with prostate cancer can be cured by surgery if the disease is localized. However, once the disease spreads to other organs, it cannot be cured with the current standard treatment, which is hormonal therapy. For patients with advanced prostate cancer who have failed standard hormonal therapy, there are currently no treatments that have been demonstrated to improve survival.

- ***Clinical data*** In June 2003, we completed a Phase I/II clinical trial in 19 patients with hormone-refractory prostate cancer. Patients were treated with a single infusion of Xcellerated T Cells. The therapy resulted in few side effects in most patients and led to significant and sustained increases in patients' lymphocyte counts. Two patients demonstrated greater than 50% decreases in serum levels of the tumor marker, PSA. In some independent clinical studies, decreases in PSA levels have been shown to correlate with improved survival in patients with prostate cancer. There was one serious adverse event reportable to the FDA involving a patient with pre-existing severe anemia who suffered congestive heart failure. The patient's symptoms resolved approximately two hours following treatment. We subsequently amended our protocol to identify patients with anemia prior to administering Xcellerated T Cells.

HIV

- ***Background.*** According to third party sources, there are estimated to be approximately 900,000 individuals infected with HIV in the United States. HIV patients are at increased risk of infections and cancer. In HIV, patients' T cells become infected with the virus, leading to low numbers of T cells and an extremely narrow T cell receptor repertoire. According to independent clinical studies, it has been shown that increasing T cell count and restoring T cell repertoire are associated with improved clinical outcome. Patients with HIV are currently treated with combinations of anti-viral drugs known as highly active antiretroviral therapy, or HAART. Although HAART is effective in suppressing the virus and delaying the onset of acquired immunodeficiency syndrome, or AIDS, HAART often ceases being effective in a significant number of patients. HAART is also associated with serious side effects.

Clinical data. One of our scientific founders independently demonstrated in the laboratory that T cells activated using an earlier version of our proprietary technology were resistant to infection with HIV. Based on this observation, he and his collaborators conducted a preclinical study in an HIV model in monkeys and a clinical trial in HIV patients who had decreased T cell counts. The preclinical monkey model study showed that T cells activated using our proprietary technology administered after one month of anti-viral drug therapy suppressed viral infection for more than a year. The results of this study were published in the medical journal *Blood* in January 2002. In an independent clinical trial conducted by one of our scientific founders under a physician sponsored IND application with the FDA, eight HIV patients were administered T cells activated using an earlier version of our proprietary technology. The results were published in the medical journal *Nature Medicine* in January 2002, where it was reported that the treatment increased the average of the patient population's T cell counts to within the normal range for at least one year following initiation of therapy. In laboratory studies, the investigators also demonstrated that they were able to restore a broad T cell receptor diversity in the T cells that were produced using this technology.

Based on these preclinical and clinical studies, we have initiated preclinical studies in HIV. We recently entered into a collaboration under which Fresenius Biotechnology GmbH plans to treat HIV patients with genetically-modified T cells produced using our Xcellerate Technology. One patient has been enrolled to date in a recently initiated Phase I clinical trial under this collaboration. In addition, one of our scientific founders is independently conducting clinical trials using genetically modified T cells grown using an earlier version of our proprietary technology to treat patients infected with HIV, the results of which are not yet available.

Autoimmune Diseases

An overactive immune system is believed to play a central role in a variety of illnesses classified as autoimmune diseases, including rheumatoid arthritis, systemic lupus erythematosus and scleroderma. Attempts to control the disease with therapeutic agents that suppress the immune system are often effective. However, some patients have more serious forms of these diseases and do not respond to conventional therapy, while others experience serious side effects from these chronic immunosuppressive therapies. Recently, high-dose chemotherapy and/or radiation have been used with autologous stem cell transplantation to eradicate these patients' diseased immune systems in an attempt to cure several of these diseases. Although effective in many patients, this form of therapy has been associated with serious and life-threatening toxicities. Many scientists now believe that certain populations of T cells play a central role in causing several autoimmune diseases. This is manifested by narrowing of the T cell receptor repertoire, which has been shown to return to normal when patients with some of these diseases achieve remission. Many therapeutic agents are available that can selectively eliminate T cells without causing the serious toxicities associated with the intensive regimens used with stem cell transplantation. We believe that if our Xcellerate Technology can be used to generate healthy T cells from patients with autoimmune diseases, it may be possible to administer Xcellerated T Cells to restore a healthy immune system after patients are treated with drugs that eliminate T cells in the body.

We have demonstrated in laboratory studies that our Xcellerate Technology can be used to activate and grow T cells from patients with several autoimmune diseases, including rheumatoid arthritis, systemic lupus erythematosus and scleroderma. These studies have also shown that we can restore the narrow T cell repertoire characteristic of many of these patients to a more normal diverse pattern using our Xcellerate Technology. We plan to initiate a clinical trial using this approach, in which patients will be treated with drugs that eliminate T cells from their body, followed by administration of Xcellerated T Cells, in patients with serious forms of autoimmune diseases if future preclinical studies achieve successful results.

Research and Development

As of January 31, 2004, we had a total of 28 employees dedicated to research and development, including 8 with advanced degrees. We spent approximately $54.3 million from January 1, 2000 through December 31, 2003 on the research and development of our Xcellerate Technology and Xcellerated T Cells. Our internal research and development efforts are focused on:

- ***Improving our Xcellerate Technology.*** We intend to continuously evaluate and improve our Xcellerate Technology. We have reduced our overall average process time for manufacturing Xcellerated T Cells from approximately 14 days to approximately 10 days. We have developed methods that further simplify our Xcellerate Technology, allowing us to increase our production yield, reduce labor and materials and lower the costs associated with the production of Xcellerated T Cells.
- ***Increasing the therapeutic activity of Xcellerated T Cells.*** We intend to continuously evaluate and improve the therapeutic activity of Xcellerated T Cells. We are currently evaluating whether other molecules of the immune system or genes could be used to improve the therapeutic activity of Xcellerated T Cells. We are working with several groups to evaluate using Xcellerated T Cells in conjunction with recently discovered antigens to specifically target cancers and infectious diseases associated with those antigens. We have conducted laboratory studies demonstrating that we can generate large numbers of antigen-specific Xcellerated T Cells with anti-tumor activity in several types of cancer, including melanoma, breast cancer, kidney cancer and lung cancer.
- ***Developing additional clinical indications for Xcellerated T Cells.*** There are many medical conditions that are associated with deficiencies in T cells. We are currently studying the potential to use Xcellerated T Cells to treat these illnesses. For example, patients with autoimmune diseases are treated with immunosuppressive drugs that damage their immune systems. We have demonstrated in laboratory studies that we can activate and grow T cells and restore a normal T cell repertoire in patients with several of these diseases. In addition, we are planning to study the use of Xcellerated T Cells in patients with congenital immunodeficiencies. Finally, we are interested in exploring the potential therapeutic use of Xcellerated T Cells in the elderly, who often have weakened immune systems.

Manufacturing and Supply

We designed, built and operate our manufacturing facility in Seattle, Washington in accordance with cGMP. We use this facility to manufacture Xcellerated T Cells for clinical trials. We have also leased an additional facility that we have designed and intend to build to manufacture Xcellerated T Cells for our planned clinical trials and, if we obtain FDA approval, initial commercialization. We expect to begin manufacturing Xcellerated T Cells at this facility in the second half of 2004. Except for our antibody-coated beads and custom bioreactor system, all of the components that are required to implement our Xcellerate Technology are commercially available products and standard clinical and blood bank supplies.

In August 1999, we entered into an agreement with Dynal for the cGMP-grade manufacture of our antibody-coated beads for clinical and future commercial uses. For completed milestones, we have paid Dynal $2.5 million as of December 31, 2003 and, assuming the remaining milestones are completed, we will be obligated to pay an additional $0.5 million. Dynal has the right to terminate the contract if we do not purchase a minimum quantity of beads. Either party may terminate the agreement as of August 2009 for any reason, or earlier upon a material breach by, or insolvency of, the other party. If the agreement is not terminated by August 2009, either party can elect to extend the term of the agreement for an additional 5 years. Otherwise, it will automatically renew on a year to year basis.

In June 2000, we entered into two service agreements with Lonza, which were subsequently amended, for the cGMP-grade manufacture of the two monoclonal antibodies for use with our antibody-coated beads. Under the

terms of these agreements, we are obligated to make certain payments to Lonza. We have paid $4.9 million as of December 31, 2003. These agreements may be terminated by either party for breach or insolvency of the other party or in the event that the manufacturing services cannot be completed for scientific or technical reasons.

Competition

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. Many entities, including pharmaceutical and biotechnology companies, academic institutions and other research organizations are actively engaged in the discovery, research and development of products that could compete with our products under development. They may also compete with us in recruiting and retaining skilled scientific talent.

There are numerous pharmaceutical and biotechnology companies that are developing therapies for cancer and infectious disease generally, and many of these companies are focused on activating the immune system using therapeutic agents, including monoclonal antibodies, cytokines, vaccines, adjuvants, dendritic cells, nucleotides and cells. We are currently aware of several companies developing *ex vivo* cell-based immunotherapy products as a method of treating cancer and infectious diseases. These competitors include Antigenics, Inc., CancerVax Corporation, Cell Genesys, Inc., CellExSys, Inc., Dendreon Corporation, Favrille, Inc., Genitope Corporation, IDM, S.A., Kirin Pharmaceutical and Valeocyte Therapies. Even if our Xcellerate Technology proves successful, we might not be able to remain competitive in this rapidly advancing area of technology. Some of our potential competitors may have more financial and other resources, larger research and development staffs and more experienced capabilities in researching, developing and testing products. Some of these companies also have more experience than us in conducting clinical trials, obtaining FDA and other regulatory approvals and manufacturing, marketing and distributing medical products. Smaller companies may successfully compete with us by establishing collaborative relationships with larger pharmaceutical companies or academic institutions. Our competitors may succeed in developing, obtaining patent protection for or commercializing their products more rapidly than us. A competing company developing, or acquiring rights to, a more effective therapeutic product for the same diseases targeted by us, or one that offers significantly lower costs of treatment, could render our products noncompetitive or obsolete.

Intellectual Property

We rely on a combination of patent, trademark, copyright and trade secret laws to protect our proprietary technologies and products. We aggressively seek US and international patent protection to further our business strategy and for major components of our Xcellerate Technology, including important antibody components and methods of T cell activation. We also rely on trade secret protection for our confidential and proprietary information. We enter into licenses to technologies we view as necessary.

We have a portfolio of issued patents and patent applications, which we believe provides patent coverage for our Xcellerate Technology. As of January 31, 2004, we owned or held exclusive rights to six issued patents, three allowed patent applications and numerous pending patent applications in the United States in the field of or directed to *ex vivo* T cell stimulation. Two of the issued patents relate to methods of stimulating T cells utilized by our Xcellerate Technology and expire in 2019, while two other issued patents, which expire in 2016, relate to a method of stimulating T cells and an antibody that we are not currently using. The final two issued patents expire in 2020 and are in the field of or directed to immunosuppression and the treatment and prevention of disorders related to T cells. These two issued patents are directed to the use of a specific compound for these applications, and one of these patents is directed specifically to compositions of matter including all likely derivatives of this compound. We also have licensed numerous currently pending foreign patent applications and 2 issued foreign patents corresponding to our T cell stimulation technology.

In general, we apply for patent protection of methods and products relating to immunotherapy for treatment of cancer, immune deficiencies, autoimmune diseases and infectious diseases. With respect to proprietary know-how that is not patentable, we have chosen to rely on trade secret protection and confidentiality agreements to

protect our interests. We have taken security measures to protect our proprietary know-how, technologies and confidential data and continue to explore further methods of protection.

We require all employees, consultants and collaborators to enter into confidentiality agreements, and all employees and most consultants enter into invention assignment agreements with us. The confidentiality agreements generally provide that all confidential information developed or made known to the individual during the course of such relationship will be kept confidential and not disclosed to third parties, except in specified circumstances. These invention agreements generally provide that all inventions conceived by the individual in the course of rendering services to us will be our exclusive property. We cannot assure you, however, that these agreements will provide meaningful protection or adequate remedies for any breach or that our trade secrets will not otherwise become known or be independently discovered by our competitors. Any of these events could adversely affect our competitive position in the marketplace.

In the case of a strategic partnership or other collaborative arrangement which requires the sharing of data, our policy is to disclose to our partner, under controlled circumstances, only data that is relevant to the partnership or arrangement during the contractual term of the strategic partnership or collaborative arrangement, subject to a duty of confidentiality on the part of our partner or collaborator. Disputes may arise as to the ownership and corresponding rights in know-how and inventions resulting from research by us and our corporate partners, licensors, scientific collaborators and consultants. We cannot assure you that we will be able to maintain our proprietary position or that third parties will not circumvent any proprietary protection we have. Our failure to maintain exclusive or other rights to these technologies could harm our competitive position.

To continue developing and commercializing our current and future products, we may license intellectual property from commercial or academic entities to obtain the rights to technology that is required for our discovery, research, development and commercialization activities.

In preparation for the commercial distribution of our products and services if we obtain FDA approval, we have filed a number of trademark applications.

Corporate Collaborations

Part of our strategy is to establish corporate collaborations with pharmaceutical, biopharmaceutical and biotechnology companies for the development and commercialization of our Xcellerate Technology. We focus our efforts on partnering our technologies in markets and diseases that we do not plan to pursue on our own. We target collaborators that have the expertise and capability to develop, manufacture, obtain regulatory approvals for and commercialize our Xcellerate Technology. In our corporate collaborations, we seek to cover our research and development expenses through research funding, milestone payments and technology or license fees. We also seek to retain significant downstream participation in product sales through either profit sharing or product royalties paid on annual net sales.

Fresenius Biotechnology GmbH

In November 2003, we licensed our Xcellerate Technology and some related improvements on an exclusive basis in the field of HIV retroviral gene therapy to Fresenius for research, development, and commercialization in Europe, with a right of first negotiation under some circumstances to expand their territory to include North America. Our agreement with Fresenius requires us to license our Xcellerate Technology, including methods for manufacturing Xcellerated T Cells, to Fresenius and supply all proprietary magnetic beads, or Xcyte Dynabeads, ordered by Fresenius to support its development and commercialization efforts. If we do not supply the Xcyte Dynabeads, Fresenius has the right to manufacture such Xcyte Dynabeads on its own or through a third party, until such time that we are able to supply the quantity of Xcyte Dynabeads ordered by Fresenius. Fresenius has agreed to reimburse us for our expenses in transferring the technology and pay us for the Xcyte Dynabeads on a cost-plus basis. In addition, under the agreement Fresenius has granted us a perpetual, irrevocable, non-exclusive, fully paid worldwide license to technology invented by Fresenius that directly relates to our Xcellerate Technology. This agreement includes royalties on net sales as well as up to 5.4 million Euros in potential

milestone payments to us, less applicable sublicense fees payable by us to third parties, for each product developed under this agreement. Fresenius' obligation to pay us royalties under this agreement terminates on a country-by-country basis upon the later of the last to expire of the licensed patents or 15 years after the first commercial sale of a product in the country. The agreement is also subject to earlier termination by Fresenius at any time if Fresenius determines it cannot develop a commercially viable product or complete a required manufacturing audit, at any time by Xcyte if Fresenius does not meet certain development and commercialization milestones and by either party for the material breach or insolvency of the other party.

We believe that partnering with Fresenius will optimize time to market of our Xcellerate Technology in the HIV field by utilizing their existing development, marketing and sales force. Fresenius initiated a Phase I trial to treat HIV patients with genetically-modified T cells produced using our Xcellerate Technology.

Technology Licenses

Where consistent with our strategy, we seek to obtain technologies that complement and expand our existing technology base. We have licensed and will continue to license technology from selected research and academic institutions, as well as other organizations. Under these license agreements, we generally seek to obtain sublicense rights. We are generally obligated under these agreements to pursue product development and pay royalties on any product sales. We have not been required to pay any royalties through December 31, 2003. In addition to license agreements, we seek relationships with other entities that may benefit us and support our business goals.

- ***Diaclone S.A.*** In October 1999, we entered into a license agreement with Diaclone. Under the agreement, Diaclone granted us an exclusive, worldwide license to make, use and sell products or services using the monoclonal antibody that binds to the CD28 molecule for all *ex vivo* uses involving therapeutic and research applications. We have an option and right of first refusal to expand our license to include *in vivo* therapeutic and research purposes. We are currently obligated to purchase all our requirements for this monoclonal antibody from Diaclone until we begin preparing for Phase III clinical trials of a product covered by this license. Under certain circumstances, we would be permitted to have the monoclonal antibody made by third parties or manufacture it ourselves. This agreement has a term of 15 years from the date of first approval by the FDA, or its foreign equivalent, of a therapeutic product containing a bead coated with the licensed antibody and may be terminated earlier by either party for material breach or insolvency of either party. We currently do not have FDA approval of any therapeutic products containing a bead coated with the licensed antibody. At the end of the term, we will have a perpetual, irrevocable, royalty-free, exclusive license. We paid initial non-refundable license fees totaling US$75,000 to Diaclone and are required to pay royalties if our products are commercialized.
- ***Fred Hutchinson Cancer Research Center.*** In October 1999, we entered into a license agreement with the Fred Hutchinson Cancer Research Center. Under the agreement, the Fred Hutchinson Cancer Research Center granted us a non-exclusive, worldwide license to make, use and sell products or services using the monoclonal antibody that binds to the CD3 molecule for T cell stimulation for *ex vivo* therapeutic and research uses other than cell separation and selection. We paid a non-refundable up-front licensing fee of $25,000 to the Fred Hutchinson Cancer Research Center, and we are obligated to pay the Fred Hutchinson Cancer Research Center a royalty fee if we or our sublicensees commercialize products or services that use the licensed monoclonal antibody. We are also required to pay fees to Fred Hutchinson Cancer Research Center under certain circumstances if we sublicense these rights to third parties. On December 1, 2000, we amended this license agreement to broaden the field of use to include any *ex vivo* use involving therapeutic and research applications in exchange for an additional non-refundable up-front fee of $25,000 and the issuance of 27,272 shares of our common stock to the Fred Hutchinson Cancer Research Center. Our obligation to pay royalties under this

license agreement will remain in effect for 15 years following the first commercial sale of our product and may be terminated earlier by either party for material breach or by Fred Hutchinson Cancer Research Center for Xcyte's insolvency. Thereafter, our license will be fully-paid.

Genetics Institute. In July 1998, we entered into a license agreement with Genetics Institute. Under the agreement, Genetics Institute granted us an exclusive license under its rights to patents and patent applications covering methods of *ex vivo* activation or expansion of human T cells for treatment and prevention of infectious diseases, cancer and immunodeficiency. We also granted Genetics Institute an option under certain circumstances to an exclusive worldwide license to certain improvements outside of our field that directly relate to the licensed patents. The technology underlying these methods originated from two of our scientific founders and their collaborators and is incorporated into our Xcellerate Technology. The term of the Genetics Institute license terminates upon the end of the enforceable term of the last licensed patent or the license agreements under which Genetics Institute has sublicensed rights to Xcyte, and may also be terminated earlier by either party for material breach. To date, two licensed patents whose terms expire in 2016 and two other patents whose terms expire in 2019 have been issued in the United States for the methods licensed. In consideration of the license, we paid a non-refundable up-front license fee totaling approximately $53,000, issued 26,522 shares of our preferred stock to Genetics Institute and issued a warrant under which Genetics Institute has the right to purchase 35,362 additional shares of our preferred stock, which will convert into a warrant to purchase our common stock after the closing of this offering. We are also obligated to pay royalties to Genetics Institute on sales of products covered by the patents licensed to us under the agreement. We are also required to pay fees to Genetics Institute if we sublicense these rights to third parties. Additionally, if we fail to devote a specified amount of resources to develop a product using these rights, Genetics Institute may convert this license from exclusive to non-exclusive.

Governmental Regulation

Governmental authorities in the United States and other countries extensively regulate the preclinical and clinical testing, approval, manufacturing, labeling, storage, record-keeping, reporting, advertising, promotion, import, export, marketing and distribution, among other things, of immunotherapy products and other drugs and biological products. In the United States, the FDA, under the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act and other federal statutes and regulations, subjects pharmaceutical products to rigorous review and regulation. If we do not comply with applicable requirements, we may be fined, our products may be recalled or seized, our clinical trials may be suspended or terminated, our production may be partially or totally suspended, the government may refuse to approve our marketing applications or allow us to distribute our products and we may be subject to an injunction and/or criminally prosecuted. The FDA also has the authority to revoke previously granted marketing authorizations.

In order to obtain approval of a new product from the FDA, we must, among other requirements, submit proof of safety and efficacy as well as detailed information on the manufacture, quality, composition and labeling of the product in a new drug application or a biologics license application. In most cases, this proof entails extensive laboratory tests and preclinical and clinical trials. This testing, the preparation of necessary applications, the processing of those applications by the FDA and review of the applications by an FDA advisory panel of outside experts are expensive and typically take many years to complete. Additionally, the FDA recently formed a new division that will regulate biologic products, such as Xcellerated T Cells. The processes and requirements associated with this new division may cause delays and additional costs in obtaining regulatory approval of our products or regulatory authorization for our clinical trials. The FDA may not act quickly or favorably in reviewing these applications, or may deny approval altogether, and we may encounter significant difficulties or costs in our efforts to obtain FDA approval, which could delay or preclude us from marketing any products we may develop. The FDA may also require post-marketing testing and surveillance to monitor the effects of approved products or place conditions on any approval that could restrict the commercial applications of these

products. The FDA may withdraw product approval if we fail to comply with regulatory standards, if we encounter problems following initial marketing or if new safety or other issues are discovered regarding our products after approval. With respect to patented products or technologies, delays imposed by the governmental approval process may materially reduce or eliminate the period during which we will have the exclusive right to exploit the products or technologies.

In order to conduct research to obtain regulatory approval for marketing, we must submit information to the FDA on the planned research in the form of an investigational new drug application. The investigational new drug application must contain, among other things, an investigational plan for the therapy, a study protocol, information on the study investigators, preclinical data, such as toxicology data, and other known information about the investigational compound. An investigational new drug application generally must be submitted by a commercial sponsor who intends to collect data on the safety and efficacy of a new drug or biological product prior to conducting human trials and submitting an application for marketing approval. In certain circumstances, an investigational new drug application may also be submitted which allows physicians to gain an initial understanding of the compound through an expanded access program. Data from expanded access trials can generally be used to support the safety, but not the efficacy, of a product.

After an investigational new drug application becomes effective, a sponsor may commence human clinical trials. The sponsor typically conducts human clinical trials in three sequential phases, but the phases may overlap. In Phase I clinical trials, the product is generally tested in a small number of patients or healthy volunteers primarily for safety at one or more doses. In Phase II, in addition to safety, the sponsor typically evaluates the efficacy of the product in a patient population somewhat larger than Phase I clinical trials. It is customary in cancer clinical trials for the FDA to allow companies to combine Phase I and Phase II clinical trials into a Phase I/II clinical trial. Phase III clinical trials typically involve additional testing for safety and clinical efficacy in an expanded population at geographically dispersed test sites and are intended to generate the pivotal data on which a marketing application will be based. The studies must be adequate and well-controlled and otherwise conform to appropriate scientific and legal standards.

Prior to the commencement of each clinical trial, the sponsor must submit to the FDA a clinical plan, or protocol, accompanied by the approval of an institutional review board responsible for protecting the welfare of study subjects for a site participating in the trials. The sponsor must also ensure that investigators obtain informed consent from all study subjects prior to commencement of each study, and the sponsor must comply with monitoring, reporting and so-called good clinical practice requirements throughout the conduct of the study, among other legal requirements. The FDA may prevent an investigational new drug application from taking effect, or may order the temporary or permanent discontinuation of a clinical trial, at any time. An institutional review board may also prevent a study from going forward, or may temporarily or permanently discontinue a clinical trial, at any time. If a study is not conducted in accordance with applicable legal requirements and sound scientific standards, the data from the study may be deemed invalid and unusable.

The sponsor must submit to the FDA the results of the preclinical and clinical trials, together with, among other things, detailed information on the manufacture, quality and composition of the product, in the form of a new drug application or, in the case of a biologic, a biologics license application. The application must also contain proposed labeling for the product setting forth the proposed conditions of use for which the applicant is seeking approval and be accompanied by the payment of a significant user fee. The FDA can refuse to file an application if it is deemed not sufficiently complete to permit review, or has some other deficiency.

Because the FDA is regulating Xcellerated T Cells as a biologic, we must submit biologics license applications to the FDA to obtain approval of our products. A biologics license application requires data showing the safety, purity and potency of the product. In a process which generally takes several years or more, the FDA reviews this application and, when and if it decides that adequate data are available to show that the new compound is both safe and effective and that other applicable requirements have been met, approves the drug or biologic for marketing. Prior to issuing a denial or an approval, the FDA often will seek recommendations from one of its

advisory committees of independent experts. The amount of time taken for this approval process is a function of a number of variables, including the quality of the submission and studies presented, the potential contribution that the compound will make in improving the treatment of the disease in question, the recommendations of the FDA advisory committee and the workload at the FDA. It is possible that our Xcellerate Technology will not successfully proceed through this approval process or that the FDA will not approve our applications in any specific period of time, or at all. Any approval, if obtained, could be limited or could be made contingent on burdensome post-approval commitments or could be otherwise restricted.

Congress enacted the Food and Drug Administration Modernization Act of 1997, in part, to ensure the availability of safe and effective drugs, biologics and medical devices by expediting the FDA review process for new products. The Modernization Act establishes a statutory program for the approval of fast track products, including qualifying biologics. We may, from time to time, decide to request fast track approval for Xcellerated T Cells. A fast track product is defined as a new drug or biologic intended for the treatment of a serious or life-threatening disease or condition that demonstrates the potential to address unmet medical needs for this disease or condition. Under the fast track program, the sponsor of a new drug or biologic may request the FDA to designate the drug or biologic as a fast track product at any time during the clinical development of the product.

The Modernization Act specifies that the FDA must determine whether the product qualifies for fast track designation within 60 days of receipt of the sponsor's request. The FDA can base approval of a marketing application for a fast track product on an effect on a clinical endpoint or on another "surrogate" endpoint that is reasonably likely to predict clinical benefit. The FDA may subject approval of an application for a fast track product to post-approval studies to validate the surrogate endpoint or confirm the effect on the clinical endpoint and prior review of all promotional materials. In addition, the FDA may withdraw its approval of a fast track product on an expedited basis on a number of grounds, including the sponsor's failure to conduct any required post-approval study with due diligence.

If the FDA's preliminary review of clinical data suggests that a fast track product may be effective, the agency may initiate review of sections of a marketing or license application for a fast track product before the sponsor completes the entire application. This rolling review may be available if the applicant provides a schedule for submission of remaining information and pays applicable user fees. However, the time periods specified under the Prescription Drug User Fee Act concerning timing goals to which the FDA has committed in reviewing an application do not begin until the sponsor submits the entire application.

We have requested, and may from time to time continue to request, orphan drug status for Xcellerated T Cells. Orphan drug designation may be granted to those products developed to treat diseases or conditions that affect fewer than 200,000 persons in the United States. We believe that some of our target cancer patient populations meet these criteria. Under the law, the developer of an orphan drug may be entitled to seven years of market exclusivity following the approval of the product by the FDA, exemption from user fee payments to the FDA and a 50% tax credit for the amount of money spent on human clinical trials. We cannot predict whether the FDA will grant either an orphan drug or fast track designation or whether our products will ultimately receive FDA approval or orphan drug market exclusivity. We also cannot predict the ultimate impact, if any, of the fast track process or orphan drug status on the timing, likelihood or scope of FDA approval of our immunotherapy products. Even if we are able to obtain FDA approval with orphan drug marketing exclusivity, other competing products may still be approved if they are deemed to be sufficiently different than our products, or clinically superior or under certain other circumstances. This could reduce or eliminate the value of any orphan drug marketing exclusivity.

The FDA may, during its review of a new drug application or biologics license application, ask for additional test data. If the FDA does ultimately approve the product, it may require post-marketing testing, including potentially expensive Phase IV studies, and surveillance to monitor the safety and effectiveness of the product. In addition, the FDA may in some circumstances impose restrictions on the use of the product, which may be difficult and expensive to administer, may affect whether the product is commercially viable and may require prior approval of promotional materials.

Before approving a new drug application or biologics license application, the FDA will also inspect the facilities where the product is manufactured and will not approve the product unless the manufacturing facilities are in compliance with cGMP. In addition, the manufacture, holding and distribution of a product must remain in compliance with cGMP following approval. Manufacturers must continue to expend time, money and effort in the area of production and quality control and record keeping and reporting to ensure full compliance with those requirements.

The labeling, advertising, promotion, marketing and distribution of a drug or biologic product must be in compliance with FDA regulatory requirements. Our distribution of pharmaceutical samples to physicians must comply with the Prescription Drug Marketing Act. In addition, manufacturers are required to report adverse events and errors and accidents in the manufacturing process. Changes to an approved product, or changes to the manufacturing process, may require the filing of a supplemental application for FDA review and approval. Failure to comply with applicable requirements can lead to the FDA demanding that production and shipment cease, and, in some cases, that the manufacturer recall products or to FDA enforcement actions that can include seizures, injunctions and criminal prosecution. These failures can also lead to FDA withdrawal of approval to market the product. Where the FDA determines that there has been improper promotion or marketing, it may require corrective communications such as “Dear Doctor” letters. Even if we comply with FDA and other requirements, new information regarding the safety or effectiveness of a product, or a change in the law or regulations, could lead the FDA to modify or withdraw a product approval.

In addition to FDA requirements, our manufacturing, sales, promotion, and other activities following product approval are subject to regulation by numerous other regulatory authorities, including, in the United States, the Centers for Medicare & Medicaid Services, other divisions of the Department of Health and Human Services and state and local governments. Among other laws and requirements, our sales, marketing and scientific/educational programs must comply with the Federal Medicare-Medicaid anti-fraud and abuse statutes and similar state laws. Our pricing and rebate programs must comply with the Medicaid rebate requirements of the Omnibus Budget Reconciliation Act of 1990. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. All of our activities are potentially subject to federal and state consumer protection and unfair competition laws.

We are also subject to regulation by the Occupational Safety & Health Administration, or OSHA, and the Environmental Protection Agency, or EPA, and to various laws and regulations relating to safe working conditions, laboratory and manufacturing practices and the use and disposal of hazardous or potentially hazardous substances, including radioactive compounds used in connection with our research and development activities, and we may in the future be subject to other federal, state or local laws or regulations. OSHA, the EPA or other regulatory agencies may promulgate regulations that may affect our research and development programs. We are also subject to regulation by the Department of Transportation and to various laws and regulations relating to the shipping of cells and other similar items. We are unable to predict whether any agency will adopt any regulation that could limit or impede our operations.

Depending on the circumstances, failure to meet these other applicable regulatory requirements can result in criminal prosecution, fines or other penalties, injunctions, recall or seizure of products, partial or total suspension of production, denial or withdrawal of pre-marketing product approval or refusal to allow us to enter into supply contracts, including government contracts.

Sales of pharmaceutical products outside the United States are subject to foreign regulatory requirements that vary widely from country to country. Whether or not we have obtained FDA approval, we must obtain approval of a product by comparable regulatory authorities of foreign countries prior to the commencement of marketing the product in those countries. The time required to obtain this approval may be longer or shorter than that required for FDA approval. The foreign regulatory approval process includes all the risks associated with FDA regulation set forth above, as well as country-specific regulations, including in some countries price controls.

In May 2000, we filed our initial Phase I investigational new drug application, or IND, involving Xcellerated T Cells to treat metastatic kidney cancer. The FDA allowed us to start the trial in June 2000. The trial was completed in February 2003. In September 2001, we amended the IND to add a Phase I study of Xcellerated T Cells to treat hormone refractory prostate cancer. The trial was completed in June 2003. In August 2002, we amended the IND to add a Phase I/II to treat multiple myeloma patients post autologous stem cell transplantation. We anticipate having clinical data regarding safety and tumor responses in 2004. In November 2002, we amended the IND to add a Phase I/II study to treat CLL. We anticipate completion of the trial in 2004. In September 2003, we amended the IND to add a randomized Phase II study to treat multiple myeloma patients with and without fludarabine. We anticipate completion of the trial in 2005. In December of 2003, we amended the IND to add a Phase II study to treat non-Hodgkin's lymphoma patients. We anticipate completion of the trial in 2005.

Legal Proceedings

From time to time, we may be involved in various legal proceedings in the ordinary course of business. Although it is not feasible to predict the outcome of these proceedings or any claims made against us, we do not anticipate that our ultimate liability arising from these proceedings or claims will have a materially adverse effect on our financial position or results of operations.

On July 26, 2000, Karen Lenahan filed suit against the University of Chicago, the University of Chicago Hospitals, Central DuPage Hospital and various doctors, seeking to recover damages in an unspecified amount in excess of $100,000 arising out of the death of Mrs. Lenahan's husband, Shawn Lenahan. The complaint, filed in the Circuit Court of Cook County, Illinois, alleged that the physicians committed medical malpractice. Mr. Lenahan was treated in an independent clinical trial conducted by one of our scientific founders using an earlier version of our proprietary technology. This trial was initiated prior to our licensing of this technology. The complaint was amended to add additional defendants, and, on February 26, 2001, a second amended complaint was filed that named us as a defendant. The second amended complaint attempted to allege that we participated in an unlawful conspiracy to induce Mr. Lenahan to participate in a drug protocol for an experimental treatment for his non-Hodgkin's lymphoma.

On May 7, 2001, we filed a motion seeking to dismiss the conspiracy claims, the only counts in the second amended complaint in which we were named as a defendant. On June 29, 2001, the court granted the motion to dismiss. On July 27, 2001, the plaintiff filed a fourth amended complaint, which again named us as a defendant and attempted to allege that we and our co-defendants unlawfully conspired against Mr. Lenahan. On August 31, 2001, we filed a motion to dismiss the conspiracy claims against us. On February 25, 2002, the court granted the motion to dismiss. However, the court granted the plaintiff one final chance to file an amended complaint. On March 26, 2002, the plaintiff filed a fifth amended complaint, which alleged similar claims as the fourth amended complaint. We filed a motion to dismiss the conspiracy claims, and, on July 22, 2002, the court granted our motion to dismiss the plaintiff's fifth amended complaint with prejudice. On August 20, 2002, the plaintiff filed a notice of appeal in the Appellate Court of Illinois, First Judicial District, from the circuit court's order granting our motion to dismiss. On April 7, 2003, we filed our response brief, and, on April 21, 2003, the plaintiff filed a reply brief. We cannot predict when we will obtain a decision on the appeal. We deny having committed any conspiracy against Mr. Lenahan, however, because of the nature of the complaint against us, we cannot predict the probability of a favorable or unfavorable outcome or estimate the amount or range of potential loss.

Employees

As of January 31, 2004, we had 70 employees, 28 of whom are directly involved in research and development and 28 of whom are involved in manufacturing operations. We consider our relations with our employees to be good.

Facilities

We currently lease a total of approximately 62,500 square feet of space at two facilities. We lease approximately 22,000 square feet of office and laboratory space and a cGMP manufacturing facility in Seattle, Washington, with monthly payments of approximately $48,000. The lease on this space expires in October 2006, and we have options to renew for two additional five-year terms. We also lease approximately 40,500 square feet of space in Bothell, Washington, with monthly payments of approximately $77,000. We plan initially to renovate 20,000 square feet of this facility for the manufacture Xcellerated T Cells for our planned clinical trials and, if we obtain regulatory approval, initial commercialization. The initial lease term on this space expires December 2010, and we have options to renew until December 2020. Under the terms of the lease, we also have rights to negotiate for further expansion space in the building.

SCIENTIFIC ADVISORY BOARD

Our Scientific Advisory Board is our network of medical, scientific and clinical advisors and collaborators who consult with our scientists. In addition, our Scientific Advisory Board members, none of whom are our employees, advise us regarding our research and development programs, the design of our clinical trials as well as other medical and scientific matters relating to our business. The following persons serve on our Scientific Advisory Board:

Joseph Bertino, M.D., is the Associate Director of the Cancer Institute of New Jersey and University Professor of Medicine and Pharmacology at the University of Medicine and Dentistry of New Jersey.

Jeffrey Bluestone, Ph.D., is one of our scientific founders and is a Professor at the University of California, San Francisco and the Director of the UCSF Diabetes Center.

Edward Clark, Ph.D., is a Professor of Immunology and a Professor of Microbiology at the University of Washington.

John Hansen, M.D., is a Member of Clinical Research at the Fred Hutchinson Cancer Research Center and Professor of Medicine at the University of Washington.

Carl June, M.D., is one of our scientific founders and is the Vice Chairman of the Department of Molecular and Cellular Engineering at the University of Pennsylvania.

Hyam Levitsky, M.D., is a Professor of Oncology, Medicine and Urology at Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins University.

Ronald Levy, M.D., is the Chief of the Division of Medical Oncology at the Stanford Medical Center.

Gerald Nepom, M.D., Ph.D., is the Director, Benaroya Research Institute at Virginia Mason.

E. Donnall Thomas, M.D., is a Member and former Director of Clinical Research at the Fred Hutchinson Cancer Research Center. Dr. Thomas was awarded the 1990 Nobel Prize in Medicine.

Craig Thompson, M.D., is one of our scientific founders and is the Scientific Director of the Abramson Family Cancer Research Institute at the University of Pennsylvania.

Robert M. Williams, Ph.D., is a University Distinguished Professor, Department of Chemistry, at Colorado State University. Dr. Williams is also a member of our board of directors.

MANAGEMENT

Executive Officers and Directors

Set forth below is the name, age, position and a brief account of the business experience of each of our executive officers and directors:

Name	Age	Position(s)
Ronald J. Berenson, M.D.	51	President, Chief Executive Officer and Director
Robert L. Kirkman, M.D.	55	Chief Business Officer and Vice President
Stewart Craig, Ph.D.	42	Chief Operating Officer and Vice President
Mark Frohlich, M.D.	42	Medical Director and Vice President
Mark L. Bonyhadi, Ph.D.	50	Vice President of Research
Kathi L. Cordova, C.P.A.	43	Senior Vice President of Finance and Treasurer
Joanna S. Black, J.D.	30	General Counsel, Vice President and Secretary
Robert E. Curry, Ph.D.	57	Director
Jean Deleage, Ph.D.	63	Director
Dennis Henner, Ph.D.	52	Director
Peter Langecker, M.D., Ph.D.	53	Director
Robert T. Nelsen, M.B.A.	40	Director
Stephen N. Wertheimer, M.M.	53	Director
Robert M. Williams, Ph.D.	51	Director

Ronald J. Berenson, M.D., is our founder and has served as our President, Chief Executive Officer and as a member of our board of directors since our inception. From April 1989 until February 1995, Dr. Berenson held several positions at CellPro, Inc., a stem cell therapy company that he founded, with his last positions being Executive Vice President, Chief Medical and Scientific Officer and Director. Dr. Berenson also serves on the board of directors of the Fred Hutchinson Cancer Research Center Foundation. Dr. Berenson was a faculty member at the Fred Hutchinson Cancer Research Center, where he last held the position of Assistant Member. Dr. Berenson is a board-certified internist and medical oncologist who completed his medical oncology fellowship training at Stanford University Medical Center. Dr. Berenson received a B.S. in biology from Stanford University and an M.D. from Yale University School of Medicine.

Stewart Craig, Ph.D., has served as our Chief Operating Officer and Vice President since October 1999. From July 1996 to September 1999, Dr. Craig served as Vice President of Development and Operations at Osiris Therapeutics, Inc., a stem cell therapy company. From January 1994 to June 1996, Dr. Craig served as Vice President of Product and Process Development at SyStemix Inc., a stem cell and gene therapy company. From June 1987 to December 1993, Dr. Craig held the positions of Group Leader and Senior Scientist at British Biotech, a biotechnology company. Dr. Craig received a B.Sc. in biochemistry and a Ph.D. in physical biochemistry from the University of Newcastle upon Tyne, UK.

Mark Frohlich, M.D., has served as our Medical Director since October 2001 and has served as our Vice President since January 2002. Dr. Frohlich is a board-certified medical oncologist with an appointment as Clinical Assistant Professor of Medicine at the University of Washington. From July 1998 to October 2001, Dr. Frohlich held the position of Assistant Adjunct Professor of Medicine at the University of California at San Francisco. From July 1994 to June 1998, Dr. Frohlich completed his fellowship in medical oncology at the University of California at San Francisco. Dr. Frohlich received a B.S. in electrical engineering and economics from Yale University and an M.D. from Harvard Medical School.

Mark L. Bonyhadi, Ph.D., has served as our Vice President of Research since January 2003. Dr. Bonyhadi previously served as our Director of Research from January 2002 to January 2003, Director of Strategic

Scientific Development from April 2001 to December 2001 and Director of Biological Research from May 1997 to March 2001. From September 1990 to April 1997, Dr. Bonyhadi served as Senior Scientist with SyStemix, Inc., a stem cell and gene therapy company. Dr. Bonyhadi received a B.A. in biology from Reed College and a Ph.D. in immunology from the University of California at Berkeley.

Kathi L. Cordova, C.P.A., has served as our Senior Vice President of Finance and Treasurer since September 2003. Ms. Cordova previously served as our Vice President of Finance from March 1997 to September 2003. From February 1994 to February 1997, Ms. Cordova held the position of Assistant Controller in a joint venture between American Life Insurance Company, a subsidiary of American International Group, an insurance company, and Italy's Confederazione Italiana Sindicati dei Lavoratori, a labor union. From August 1991 to January 1994, Ms. Cordova served as Management Associate with the Life Division of American International Group, an insurance company. Ms. Cordova received a B.A. in international relations from Stanford University and an M.A. in international relations from The Johns Hopkins University.

Robert Kirkman, M.D., Vice President and Chief Business Officer, joined us in January, 2004. Prior to joining us, Dr. Kirkman held the position of Vice President, Business Development, Finance, Accounting and Corporate Communications at Protein Design Labs, Inc. from 1998 to 2003. Prior to that, Dr. Kirkman served as Chief of the Division of Transplantation at Brigham and Women's Hospital, and as an Associate Professor of Surgery at Harvard Medical School. Dr. Kirkman received a B.A. in Economics from Yale University and an M.D. from Harvard Medical School. He is a Fellow of the American College of Surgeons.

Joanna S. Black, J.D., has served as our General Counsel and Secretary since January 2002 and has served as our Vice President since September 2003. From September 1998 to January 2002, Ms. Black worked as an attorney at Venture Law Group, A Professional Corporation, a law firm. From August 1997 to August 1998, Ms. Black worked as an attorney at Wilson Sonsini Goodrich & Rosati, P.C., a law firm. Ms. Black received a B.A. in economics and public policy from Stanford University and a J.D. from Columbia University School of Law.

Robert E. Curry, Ph.D., has served as one of our directors since July 2002 and from May 2000 to January 2002. Dr. Curry has been a Venture Partner at Alliance Technology Ventures, a venture capital firm, since July 2002. Dr. Curry previously served as a General Partner and a Venture Partner of the Sprout Group from May 1991 to June 2002. He currently is a director of Emerald Bio-Agricultural Corporation, a medical products company, and Tripath Imaging, Inc., a cancer therapy company. Dr. Curry received a B.S. in physics from the University of Illinois and an M.S. and Ph.D. in chemistry from Purdue University.

Jean Deleage, Ph.D., has served as one of our directors since August 1996. Dr. Deleage is a founder and managing director of Alta Partners, a venture capital firm, and was previously a founder of Burr, Egan, Deleage & Company and Sofinnova Ventures, Inc., a venture capital fund. Dr. Deleage is director of Crucell, Kosan Biosciences and Rigel Pharmaceuticals, Inc. and several private companies, all biopharmaceutical companies. Dr. Deleage received an M.S. in electrical engineering from the Ecole Supérieure d'Electricité and a Ph.D. in economics from the Sorbonne.

Dennis Henner, Ph.D., has served as one of our directors since July 2002. Dr. Henner has been a General Partner at MPM Capital, a venture capital firm, since January 2002 and was a Venture Partner at MPM Capital from May 2001 through December 2001. From April 1996 to February 2001, Dr. Henner held the positions of Senior Vice President of Research and Vice President of Research at Genentech, Inc., a biotechnology company. Dr. Henner is currently director of biotechnology companies Tercica Medica, Inc., Rigel, Inc., Synergia Pharma, Inc. and Rinat Neuroscience Corporation. Dr. Henner received his B.A. in Life Sciences and his Ph.D. from the Department of Microbiology at the University of Virginia.

Peter Langecker, M.D., Ph.D., has served as one of our directors since January 2000. Since October 1999, Dr. Langecker has served as Chief Medical Officer and Vice President of Clinical Affairs of BioMedicines, Inc., a biotechnology company. From July 1997 to September 1999, Dr. Langecker served as Vice President of Clinical

Affairs and Regulatory Affairs of Sugen, Inc., a biotechnology company. From March 1995 to July 1997, Dr. Langecker served as Vice President of Clinical Affairs of Coulter Pharmaceuticals, Inc., a biotechnology company. Before that, Dr. Langecker held various medical positions at Ciba Geigy and Schering-Plough. Dr. Langecker received an M.D. and a Ph.D. in medical sciences from Ludwig Maximilians University in Munich.

Robert T. Nelsen, M.B.A., has served as one of our directors since August 1996. Since 1992, Mr. Nelsen has served as a managing director of ARCH Venture Partners, a venture capital firm. Mr. Nelsen also serves as a director of Adolor Corporation (ADLR), an analgesics development company, Caliper Technologies Corporation (CALP), a biochip company, and Illumina Corporation (ILMN), a biotechnology company. Mr. Nelsen received a B.S. in biology and economics from the University of Puget Sound and an M.B.A. from the University of Chicago.

Stephen N. Wertheimer, M.M., has served as one of our directors since November 2003. Mr. Wertheimer has served as a managing director of W Capital Partners, a private equity firm, since 2001. From 1996 to 2001, Mr. Wertheimer held the position of managing director of CRT Capital Group. Mr. Wertheimer is currently director of El Paso Electric Company, an electric utility, and Trikon Technologies, Inc., a semiconductor equipment company. Mr. Wertheimer received an M.M. from the Kellogg School, Northwestern University, and earned a B.S. in finance and economics at Indiana University.

Robert M. Williams, Ph.D., has served as one of our directors since November 1996 and a member of our Scientific Advisory Board since 1995. Since September 1980, Professor Williams has served as a Professor of Chemistry at Colorado State University, and, in 2001, he was appointed University Distinguished Professor. During his career, Professor Williams has provided consulting services to several biotechnology and pharmaceutical companies, including Cubist Pharmaceutical Company, Microcide Pharmaceuticals, Hoffman-La Roche, G.D. Searle, and EPIX Medical, Inc. Professor Williams received a B.A. in chemistry from Syracuse University and a Ph.D. in organic chemistry from the Massachusetts Institute of Technology. Following graduate school, Professor Williams served as a postdoctoral fellow at Harvard University.

Board Composition

Our board of directors is currently comprised of eight directors. Following the closing of this offering, the board will be divided into three classes, with each director serving a three-year term and one class being elected at each year's annual meeting of stockholders. Dr. Langecker and Dr. Williams will be in the class of directors whose initial term expires at the 2004 annual meeting of stockholders. Dr. Deleage, Dr. Henner and Mr. Wertheimer will be in the class of directors whose initial term expires at the 2005 annual meeting of stockholders. Dr. Berenson, Dr. Curry and Mr. Nelsen will be in the class of directors whose initial term expires at the 2006 annual meeting of stockholders.

Board Committees

Our board of directors has established an audit committee, a compensation committee and a pricing committee.

The audit committee currently consists of Dr. Curry, Dr. Deleage and Mr. Wertheimer. The audit committee is responsible for assuring the integrity of our financial control, audit and reporting functions and reviews with our management and our independent auditors the effectiveness of our financial controls and accounting and reporting practices and procedures. In addition, the audit committee reviews the qualifications of our independent auditors, is responsible for their appointment, compensation, retention and oversight and reviews the scope, fees and results of activities related to audit and non-audit services. Prior to the formation of the audit committee, the full board of directors conducted the responsibilities of the audit committee, which met annually with representatives of our independent auditors, including in executive sessions where members of management were excused.

The pricing committee consists of Dr. Berenson, Dr. Deleage, Dr. Curry and Mr. Nelsen. The pricing committee is responsible for determining the terms of this initial public offering, including, but not limited to, determining the number of shares to be sold by us and the initial public offering price per share.

Effective upon this offering, the compensation committee will consist of Dr. Curry, Mr. Nelsen and Dr. Langecker. The compensation committee's principal responsibility is to administer our stock plans and to set the salary and incentive compensation, including stock option grants, for our Chief Executive Officer and other executive officers.

Director Compensation

Our seven outside directors are compensated with options to purchase our common stock. The only cash compensation they receive is reimbursement for out-of-pocket expenses incurred in connection with attending board and committee meetings. In November 1996, Dr. Deleage and Dr. Williams were each awarded non-statutory options for 5,454 shares of our common stock. In November 1999, Dr. Langecker was awarded a non-statutory option for 5,454 shares of our common stock. These shares vest over a four-year period at a rate of 25% of the total number of shares one year after the date of grant, with the remaining shares vesting monthly in equal installments over the next 36 months. In November 2003, Dr. Williams was awarded non-statutory options for 2,727 fully vested shares of our common stock in connection with his service on our Scientific Advisory Board. Directors who are our employees are eligible to participate in our 1996 Stock Option Plan and, effective at the closing of this offering, will also be eligible to participate in our 2003 Stock Plan and 2003 Employee Stock Purchase Plan. Until the closing of this offering, directors who are not our employees have been eligible to participate in our 1996 Stock Option Plan. Effective at the closing of this offering, directors who are not our employees will be eligible to participate in our 2003 Directors' Stock Option Plan as well but will no longer be eligible to participate in our 1996 Stock Option Plan.

Compensation Committee Interlocks and Insider Participation

Dr. Deleage, Mr. Nelsen, Dr. Curry and Dr. Berenson served on our compensation committee in 2002. During 2002, none of our executive officers served as a director or member of the compensation committee of any other entity that had any executive officer who served on our board of directors or on our compensation committee.

Limitations on Liability and Indemnification of Officers and Directors

Our amended and restated certificate of incorporation, which will be effective upon the closing of this offering, limits the liability of our directors to the maximum extent permitted by Delaware law. Delaware law provides that a corporation may eliminate the personal liability of its directors for monetary damages for breach of their fiduciary duties as directors, except liability for any of the following acts:

- breach of their duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which the director derived an improper personal benefit.

Our amended and restated bylaws, which will be effective upon the closing of this offering, provide that we will indemnify our directors, officers, employees and other agents to the fullest extent permitted by the Delaware General Corporation Law. Our amended and restated bylaws also permit us to secure insurance on behalf of any officer, director, employee or other agent of ours for any liability arising out of his or her actions in such capacity, regardless of whether the Delaware General Corporation Law would permit a corporation to indemnify for such liability.

We have obtained directors' and officers' insurance providing indemnification for all of our directors, officers and employees for certain liabilities. In addition to the indemnification provided for in our amended and restated bylaws, we have entered into agreements to indemnify our directors and executive officers. These agreements, among other things, indemnify our directors and executive officers for expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by any of them in any action or proceeding arising out of his or her services as a director, officer, employee, agent or fiduciary of ours, any subsidiary of ours or any other company or enterprise to which he or she provides services at our request. We believe that these provisions and agreements are necessary to attract and retain qualified persons as directors and executive officers. At present, there is no litigation or proceeding involving any of our directors or officers in which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

Executive Compensation

The following table summarizes the compensation paid to, awarded to or earned during 2003 by our Chief Executive Officer and each of our four other most highly compensated executive officers whose total salary and bonus exceeded $100,000 for services rendered to us in all capacities during 2003. The executive officers listed in the table below are referred to in this prospectus as our named executive officers.

Summary Compensation Table

Name and principal position(s)	Annual compensation for 2003		Long-term compensation Securities underlying options	All other compensation
	Salary	Bonus		
Ronald J. Berenson, M.D. President and Chief Executive Officer	$ 249,714	$ 35,000	$ —	$ 286[1]
Stewart Craig, Ph.D. Chief Operating Officer and Vice President	215,176	—	—	284[2]
Kathi L. Cordova, C.P.A. Senior Vice President of Finance and Treasurer	150,547	—	—	286[3]
Mark Frohlich, M.D Medical Director and Vice President	181,759	17,447	—	513[4]
Lewis Chapman Chief Business Officer	201,488	35,000	—	380[5]
Joanna S. Black, J.D. General Counsel and Vice President	154,882	—	—	264[6]

(1) Dr. Berenson received other compensation consisting of the payment of insurance premiums for group term life benefits in the amount of $286.
(2) Dr. Craig received other compensation consisting of the payment of insurance premiums for group term life benefits in the amount of $284.
(3) Ms. Cordova received other compensation consisting of the payment of insurance premiums for group term life benefits in the amount of $286.
(4) Dr. Frohlich received other compensation consisting of the payment of insurance premiums for group term life benefits in the amount of $513.
(5) Mr. Chapman received other compensation consisting of the payment of insurance premiums for group term life insurance in the amount of $380. Mr. Chapman's employment with us ended in August 2003.
(6) Ms. Black received other compensation consisting of the payment of insurance premiums for group term life benefits in the amount of $264.

The following table provides summary information concerning the individual grants of stock options to each of our named executive officers for the fiscal year ended December 31, 2003. The exercise price per share was valued by our board of directors on the date of grant, and each option was issued at the estimated fair market

value on the date of grant based upon the purchase price paid by investors for shares of our preferred stock, taking into account the liquidation preferences and other rights, privileges and preferences associated with such preferred stock.

Each option represents the right to purchase one share of our common stock. The options generally vest over four years. See "Management—Equity compensation plan information" for more details regarding these options. In 2003, we granted options to purchase an aggregate of 225,470 shares of our common stock to various officers, employees, directors and others.

The potential realizable value at assumed annual rates of stock price appreciation for the option term represents hypothetical gains that could be achieved for the respective options if exercised at the end of the option term. SEC rules specify the 0%, 5% and 10% assumed annual rates of compounded stock price appreciation, which do not represent our estimate or projection of our future common stock prices. These amounts represent assumed rates of appreciation in the value of our common stock from the initial public offering price, assuming an initial public offering price of $14 per share. Actual gains, if any, on stock option exercises depend on the future performance of our common stock and overall stock market conditions. The amounts reflected in the table may not necessarily be achieved.

Option Grants in Fiscal Year 2003[(1)]

Named executive officer	Number of securities underlying options granted	Percentage of total options granted to employees	Exercise price per share	Expiration date	Potential realizable value at assumed annual rates of stock appreciation for option term		
					0%	5%	10%
Ronald J. Berenson, M.D.	45,453	21.18%	$ 5.50	09/22/13	$ 386,351	$ 786,543	$ 1,400,516
Stewart Craig, Ph.D.	18,181	8.47%	5.50	09/22/13	154,539	314,614	560,200
Mark Frohlich, M.D.	36,363	16.94%	5.50	09/22/13	309,086	629,244	1,120,431
Kathi L. Cordova, C.P.A.	18,181	8.47%	5.50	09/22/13	154,539	314,614	560,200
Joanna S. Black, J.D.	13,636	6.35%	5.50	09/22/13	115,906	235,965	420,158

[(1)]These options were granted under our 1996 Stock Option Plan and vest over a four-year period.

The following table shows information as of December 31, 2003 concerning the number and value of exercised options and unexercised options held by each of our named executive officers. There was no public trading market for our common stock as of December 31, 2003. Accordingly, the value of the unexercised in-the-money options listed below has been calculated on the basis of the assumed initial public offering price of $14 per share, less the applicable exercise price per share multiplied by the number of shares underlying the options.

Aggregated Option Exercises During 2003 and Year-End Option Values

Named executive officer	Shares acquired upon exercise	Value realized	Number of securities underlying unexercised options at December 31, 2003		Value of unexercised in-the-money options at December 31, 2003	
			Exercisable	Unexercisable	Exercisable	Unexercisable
Ronald J. Berenson, M.D.	—	$ —	40,150	78,029	$ 466,222	$ 663,247
Stewart Craig, Ph.D.	—	—	60,301	39,696	709,153	337,416
Mark Frohlich, M.D.	—	—	16,907	55,818	143,710	474,453
Kathi L. Cordova, C.P.A.	—	—	11,029	26,242	114,569	223,057
Joanna S. Black, J.D.	—	—	8,521	23,295	72,429	198,008

Employment Agreements

Ms. Black's employment agreement, dated December 31, 2001, provides for at-will employment for an unspecified term. Under this agreement, Ms. Black is entitled to an annual base salary of $150,000 per year and an initial stock option grant for 9,090 shares of our common stock. This employment agreement also provides that Ms. Black will receive severance payments equal to three months of her then current base salary, paid ratably over a three-month period, and three months of continued health coverage if her employment is terminated other than for cause and she signs a standard release of any claims against us.

Mr. Chapman's employment agreement, dated May 29, 2002, provides for at-will employment for an unspecified term. Under this agreement, Mr. Chapman is entitled to an annual base salary of $200,000 per year, an initial stock option grant for 72,727 shares of our common stock, a one-time signing bonus of $40,000 and a one-time home purchase bonus of $35,000. This employment agreement also provides that Mr. Chapman will receive severance payments equal to six months of his then current base salary, paid ratably over a six-month period, and six months of continued health coverage if his employment is terminated other than for cause and he signs a standard release of any claims against us. Mr. Chapman's employment with us ended in August 2003, and we are currently making these severance payments to him.

Dr. Frohlich's employment agreement, dated August 27, 2001, provides for at-will employment for an unspecified term. Under this agreement, Dr. Frohlich is entitled to an annual base salary of $170,000, an initial stock option grant for 7,272 shares of our common stock, a one-time signing bonus of $40,000 and a loan of $50,000 for a down payment of a principal residence forgiven over four years. This employment agreement also provides that Dr. Frohlich will receive severance payments equal to three months of his then current base salary, paid ratably over a three-month period, and three months of continued health coverage if his employment is terminated other than for cause and he signs a standard release of any claims against us. In this event, Dr. Frohlich's employment agreement provides that we will forgive the outstanding principal of the amount loaned to him for a down payment on a principal residence.

Dr. Kirkman's employment agreement, dated January 15, 2004, provides for at-will employment for an unspecified term. Under this agreement, Dr. Kirkman will receive an annual base salary of $240,000, a stock option grant for 72,727 shares of our common stock, a one-time signing bonus of $85,000 and relocation assistance reimbursement up to an aggregate of $15,000. This employment agreement also provides that Dr. Kirkman will receive severance payments equal to six months of his then current base salary, paid ratably over a six-month period, and six months of continued health coverage if his employment is terminated other than for cause, provided that he signs a standard release of any claims against us at such time.

Equity Compensation Plan Information

2003 Stock Plan

Our 2003 Stock Plan was adopted by our board of directors in September 2003 and will be submitted for approval by our stockholders prior to completion of this offering. This plan provides for the grant of incentive stock options to employees (including employee directors) and nonstatutory stock options and stock purchase rights to employees, directors (excluding non-employee directors) and consultants. The purposes of this plan are to attract and retain the best available personnel, to provide additional incentives to our employees and consultants and to promote the success of our business. A total of 636,363 shares of common stock are reserved for issuance under this plan. The number of shares reserved for issuance under this plan will automatically increase on the first day of each fiscal year beginning in 2005 and ending in 2010 by the lesser of:

- 109,090 shares;
- 4% of the number of shares of our common stock outstanding on the last day of the immediately preceding fiscal year; or
- any lesser number of shares that our board of directors determines.

All share numbers reflected in this plan summary, as well as the exercise price or purchase price applicable to outstanding options or purchase rights, will be automatically proportionately adjusted in the event we undertake certain changes in our capital structure, such as a stock split, stock dividend or other similar transaction.

The administrator of the plan is our board of directors or a committee of our board. In the case of options and stock purchase rights intended to qualify as "performance-based compensation" within the meaning of Section 162(m) of the Internal Revenue Code of 1986, as amended, the committee will consist of two or more "outside directors" within the meaning of Section 162(m). In addition, in administering the plan, we intend to comply with other applicable legal and regulatory requirements as may apply from time to time, including any NASDAQ listing requirements. The administrator determines the terms of options and stock purchase rights granted under this plan, including the number of shares subject to the award, the exercise or purchase price and the vesting and/or exercisability of the award and any other conditions to which the award is subject. No employee, however, may receive awards for more than 181,818 shares under this plan in any fiscal year. Incentive stock options granted under this plan must have an exercise price of at least 100% of the fair market value of the common stock on the date of grant. Incentive stock options granted to an employee who holds more than 10% of the total voting power of all classes of our stock or any parent or subsidiary's stock cannot be less than 110% of the fair market value of the common stock on the date of grant. The exercise price of nonstatutory stock options and the purchase price of stock purchase rights will be the price determined by the administrator, although nonstatutory stock options and stock purchase rights granted to our Chief Executive Officer and our four other most highly compensated officers will generally equal at least 100% of the grant date fair market value if we intend that the awards to those individuals will qualify as "performance-based compensation" within the meaning of Section 162(m) of the Internal Revenue Code. Payment of the exercise or purchase price may be made in cash or any other consideration determined by the administrator, subject to applicable legal requirements.

The administrator will determine the term of options granted under this plan, which may not exceed 10 years, or 5 years in the case of an incentive stock option granted to a holder of more than 10% of the total voting power of all classes of our stock or a parent or subsidiary's stock. Generally, an option granted under this plan is non-transferable, other than by will or the laws of descent or distribution, and may be exercised during the lifetime of the optionee only by the optionee. However, the administrator may, in its discretion, provide for the limited transferability of non-statutory stock options granted under this plan. We generally have the right to repurchase any stock issued pursuant to stock purchase rights granted under this plan upon the termination of the holder's employment or consulting relationship with us for any reason, including death or disability. The repurchase price is the original purchase price paid by the purchaser or the fair market value of the shares at the date of the repurchase, whichever is less. This repurchase right will lapse at a rate that the administrator may determine.

If we sell all or substantially all of our assets or if we are acquired by another corporation, each outstanding option and stock purchase right may be assumed or an equivalent award may be substituted by the successor corporation, with appropriate adjustments made to both the price and number of shares subject to the option or purchase right. If the successor does assume the outstanding options and purchase rights, the lesser of 25% of the shares subject to an option or initially subject to repurchase or the remaining unvested shares will vest immediately prior to the closing of the transaction, and, if the holder is "involuntarily terminated" within one year after the closing, the lesser of another 25% of the shares subject to the option or initially subject to repurchase or the remaining unvested shares will vest on termination. "Involuntary termination" includes termination by us without "cause," or voluntary resignation within 30 days following: (A) a reduction in the optionholder's base salary of more than 20% (except where there is a similar reduction in the base salaries of similarly situated employees) or (B) relocation of the optionholder's principal work site by more than 50 miles. If the successor corporation does not assume options and purchase rights or substitute equivalent options or purchase rights, then vesting of all shares subject to options will accelerate fully, all repurchase rights will lapse immediately prior to the closing of the transaction and options and purchase rights will terminate as of the closing of the transaction.

The administrator has authority to amend or terminate this plan, but no action may be taken that impairs the rights of any holder of an outstanding option or stock purchase right without the holder's consent. In addition, we

must obtain stockholder approval of amendments to the plan as required by applicable law. Unless terminated earlier by the board of directors, this plan will terminate in 2013.

1996 Stock Option Plan

Our 1996 Stock Option Plan was adopted by our board of directors in September 1996. As of December 31, 2003:

- 717,615 shares of common stock were issuable upon exercise of outstanding options granted under this option plan at a weighted average exercise price of $4.48
- 167,330 shares of common stock were issued upon exercise of options at purchase prices ranging between $0.55 and $5.50; and
- 278,691 shares of common stock remained available for future grants under this plan.

The board of directors amended this plan in September 2003 to increase the number of shares reserved for issuance under the plan by an additional 363,636 to 1,163,636. The amended plan will be submitted to our stockholders for approval prior to completion of this offering. All share numbers reflected in this plan summary, as well as the exercise price applicable to outstanding options, will be automatically proportionately adjusted in the event we make certain changes in our capital structure, such as a stock split, stock dividend or other similar transaction.

The terms of the awards under this plan are generally the same as the terms of the awards that may be issued under the 2003 Stock Plan, except for the following features:

- only options can be granted under this plan;
- stock options granted under this plan are non-transferable except by will or the laws of descent and distribution; and
- options granted to residents of California prior to the closing of this offering must meet certain specific requirements with respect to a minimum 20% vesting per year, a minimum post-termination exercise period of 30 days in circumstances other than death or disability (and 6 months in the case of death or disability) and a minimum exercise price of 85% of fair market value for non-statutory options.

If we sell all or substantially all of our assets, or if we are acquired by another corporation, each outstanding option may be assumed or an equivalent award substituted by the successor corporation, with appropriate adjustments made to both the price and number of shares subject to the option. If the successor assumes the outstanding options or substitutes equivalent options, 25% of the shares subject to each option that are unvested immediately prior to the consummation of the transaction will vest immediately prior to the closing of the transaction. If the successor corporation does not assume options or substitute equivalent options or a comparable cash incentive program based on the value of the options at the closing, then vesting of all shares subject to options will accelerate fully immediately prior to the closing of the transaction unless otherwise provided under an individual grant.

2003 Employee Stock Purchase Plan

Our 2003 Employee Stock Purchase Plan was adopted by our board of directors in September 2003 and will be submitted for approval by our stockholders prior to completion of this offering. A total of 109,090 shares of common stock are reserved for issuance under this plan, none of which have been issued as of the date of this prospectus. The number of shares reserved for issuance under this plan will automatically increase on the first day of each of our fiscal years beginning in 2005 and ending in 2010 by the lesser of:

- 54,545 shares;
- 1% of the number of shares of common stock outstanding on the last day of the immediately preceding fiscal year; or
- any lesser number of shares that our board of directors determines.

All share numbers reflected in this plan summary, as well as the purchase price applicable to outstanding purchase rights, will be automatically proportionately adjusted in the event we make certain changes in our capital structure, such as a stock split, stock dividend or other similar transaction. If approved by our stockholders, this plan becomes effective upon the date of this offering. Unless terminated earlier by our board of directors, this plan terminates in 2023.

This plan, which is intended to qualify under Section 423 of the Internal Revenue Code, allows employees to purchase our common stock at a discount from the market price through payroll deductions. The plan will be implemented by a series of offering periods, each of which has a duration of approximately six months, commencing generally on May 1 and November 1 of each year. We expect the first offering period to commence on the effective date of the registration statement of which this prospectus is a part and end on April 30, 2004. Each eligible employee will automatically be granted an option to participate in the plan and will be automatically enrolled in the first offering period. Payroll deductions and continued participation in the initial offering period will not be determined until after the effective date of the Form S-8 registration statement, which we intend to file to register the shares reserved for issuance under this plan, as described below. An automatic purchase will be made for participants on the last trading day of each offering period.

Our board of directors, or a committee appointed by the board, will administer this plan. In addition, in administering the plan, we intend to comply with other applicable legal and regulatory requirements as may apply from time to time, including any NASDAQ listing requirements. Our employees, including officers and employee directors or employees of any majority-owned subsidiary designated by the board, are eligible to participate in this plan if they are customarily employed by us or any such subsidiary for at least 20 hours per week and more than five months per year. The plan prohibits granting purchase rights to an employee in the following circumstances:

- where, immediately after the grant, the employee would own stock and/or hold outstanding options to purchase stock equaling 5% or more of the total voting power or value of all classes of our stock or the stock of our subsidiaries; or
- where the option would permit the employee to purchase stock under this plan at a rate that exceeds $25,000 per calendar year in which the option is outstanding.

This plan permits eligible employees to purchase common stock through payroll deductions of up to 15% of an employee’s eligible cash compensation, which includes salary, bonuses and other wage payments made by us to the participants. A participant may purchase a maximum of 454 shares of our common stock under this plan in any one offering period.

Amounts deducted and accumulated by plan participants are used to purchase shares of our common stock at the end of each six-month offering period. The purchase price is equal to 85% of the fair market value of the

common stock at the first trading day of the offering period or at the last trading day of the offering period, whichever is less. Employees may end their participation in this plan at any time prior to the last trading day of an offering period, and participation ends automatically on termination of employment.

If we merge or consolidate with or into another corporation or sell all or substantially all of our assets, each right to purchase stock under this plan may be assumed, or an equivalent right substituted, by the successor corporation. However, if the successor corporation refuses to assume each purchase right or to substitute an equivalent right, the board of directors will shorten any ongoing offering period so that employees' rights to purchase stock under this plan are exercised prior to the transaction. Our board of directors may extend future offering periods to up to 27 months and may increase or decrease the maximum contribution rate of an employee's eligible cash compensation. Our board of directors has the power to amend or terminate this plan as long as the action does not adversely affect any outstanding rights to purchase stock under the plan. However, our board of directors may amend or terminate this plan or an offering period even if it would adversely affect outstanding purchase rights in order to avoid our incurring adverse accounting charges or if the board of directors determines that termination of the plan or offering period is in our best interests and the best interests of our stockholders. We must obtain stockholder approval for any amendment to the purchase plan to the extent required by law.

2003 Directors' Stock Option Plan

Our 2003 Directors' Stock Option Plan was adopted by our board of directors in September 2003 and will be submitted for approval by our stockholders prior to completion of this offering. If approved by our stockholders, this plan will become effective on the effective date of the registration statement of which this prospectus is a part. A total of 90,909 shares of common stock are reserved for issuance under the this plan, all of which remain available for future grants as of the date of this prospectus. All share numbers reflected in this plan summary, as well as the exercise price applicable to outstanding options, will be automatically proportionately adjusted in the event we make certain changes in our capital structure, such as a stock split, stock dividend or other similar transaction.

This plan is designed to work automatically, without administration. However, to the extent administration is necessary, it will be performed by our board of directors. It is expected that any conflicts of interest that may arise will be addressed by abstention of any interested director from both deliberations and voting regarding matters in which the director has a personal interest. Unless terminated earlier by the board of directors, this plan will terminate in 2013.

This plan provides that each person who becomes a non-employee director after the completion of this offering will be granted a non-statutory stock option to purchase 4,545 shares of our common stock on the date when the person first becomes a member of our board of directors. On the date of each annual meeting of our stockholders, each of our non-employee directors (including non-employee directors who did not receive the 4,545 share grant described above) will be granted an option to purchase 1,818 shares of common stock if, on that date, the director has served on our board of directors for at least six months. The exercise price of all stock options granted under this plan will be equal to the fair market value of the common stock on the date of grant of the option. This plan provides that one third of the total number of shares subject to each option granted to a new director will vest 12 months after the date of grant. Afterwards, the remaining shares will vest in equal monthly installments over the next two years so that the option will be fully vested after three years. Options granted to directors on the date of each annual meeting of our stockholders will vest in full on the day prior to the first anniversary of the date of the grant of the option.

All options granted under this plan will have a term of 10 years and an exercise price equal to the fair market value on the date of grant. If a non-employee director ceases to serve as a director for any reason other than death or disability, he or she may, within the 90 days after the date he or she ceases to be a director, exercise options that were vested as of the date of termination. If the former director does not exercise the option within this

90-day period, the option will terminate. If a director's service terminates as a result of his or her disability or death, or if a director dies within three months following termination, the director or his or her estate may exercise options that were vested as of the date of termination or death at any time during the 12 months after the date of termination or death. Options granted under this plan are generally non-transferable by the option holder other than by will or the laws of descent or distribution, pursuant to a qualified domestic relations order or to family members or family trusts or foundations. Generally, only the option holder or a permitted transferee may exercise the option during the lifetime of the option holder.

If we are acquired by another corporation, each option outstanding under this plan will be assumed or equivalent options will be substituted by our acquirer, unless our acquirer does not agree to this assumption or substitution. If our acquirer does not agree to assume the options or substitute them, the options will terminate upon consummation of the transaction. In connection with an acquisition that qualifies as a change of control as defined in the option plan, the vesting of each outstanding option will accelerate in full, and each director holding options under this plan will have the right to exercise his or her options immediately before the consummation of the acquisition as to all shares underlying the options. Our board of directors may amend or terminate this plan as long as we obtain stockholder approval for any amendment to the extent required by applicable law and the procedure for option grants are not amended more than once every 6 months, other than to the extent required by applicable law.

401(k) Plan

Effective February 1, 1997, we established a tax-qualified employee savings and retirement plan, or 401(k) plan, which covers all of our employees. This plan is intended to qualify under Section 401 of the Internal Revenue Code so that contributions by us to the plan, if any, will be deductible by us when made. Under this plan, eligible employees may elect to reduce their current compensation and defer their pre-tax earnings, subject to the Internal Revenue Service's annual contribution limits. Deferral contributions are fully vested at all times. This plan permits, but does not require, discretionary matching contributions by a percentage amount that our board of directors may annually determine. The plan also permits additional discretionary contributions by us on behalf of all participants in the plan. These additional company contributions vest 25% per year of service and will be fully vested after four years of service. The trustee under the plan invests an employee's account balance under the plan in accordance with the employee's written direction. To the extent an employee directs the investment of his or her account balance under the plan, the Employment Retirement Income Security Act relieves the trustee from liability for any loss resulting from the employee's direction of the investment.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

During the last three fiscal years, there has not been any transaction or series of similar transactions to which we were or are a party in which the amount involved exceeded or exceeds $60,000 and in which any of our directors or executive officers, any holder of more than 5% of any class of our voting securities or any member of the immediate family of any of these persons had or will have a direct or indirect material interest, other than the compensation arrangements described in “Management” and the transactions described below.

We believe that we have executed all of the transactions described below on terms no less favorable to us than we could have obtained from unaffiliated third parties. It is our intention to ensure that all future transactions between us and our officers, directors and principal stockholders and their affiliates are approved by a majority of our board of directors, including a majority of the independent and disinterested members of our board of directors, and are on terms no less favorable to us than those that we could obtain from unaffiliated third parties.

From our inception through December 31, 2003, we issued the following securities to various investors in private placement transactions:

- 1,151,664 shares of Series A preferred stock to investors including, but not limited to, entities affiliated with Alta Partners, ARCH Venture Partners, CV Sofinnova Venture Partners and Sprout Group at a purchase price of $5.23 per share in August 1996;
- 683,125 shares of Series B preferred stock to investors including, but not limited to, entities affiliated with Alta Partners, ARCH Venture Partners, CV Sofinnova Venture Partners and Sprout Group at a purchase price of $6.05 per share in August 1997;
- 1,306,470 shares of Series C preferred stock to investors including, but not limited to, entities affiliated with Alta Partners, ARCH Venture Partners, CV Sofinnova Venture Partners, Falcon Technology Partners, Fluke Capital Management, TGI Fund (W Capital Partners acquired these shares from TGI Fund), Sprout Group and Vulcan Ventures at a purchase price of $9.19 per share in July 1998;
- 1,838,139 shares of Series D preferred stock to investors including, but not limited to, entities affiliated with Alta Partners, ARCH Venture Partners, MPM Capital, Sprout Group, Vector Fund, Vulcan Ventures and TGI Fund (W Capital Partners acquired these shares from TGI Fund) at a purchase price of $15.29 per share in May 2000 and August 2000;
- 863,648 shares of Series E preferred stock to investors including, but not limited to, entities affiliated with Alta Partners, ARCH Venture Partners, China Development Industrial Bank Inc., MPM Capital, Sprout Group, Vulcan Ventures and TGI Fund (W Capital Partners acquired these shares from TGI Fund) at a purchase price of $15.29 per share in November 2001; and
- 808,040 shares of Series F preferred stock to investors including, but not limited to, entities affiliated with Alta Partners, ARCH Venture Partners, RiverVest Venture Fund, Sprout Group, Vector Fund and V-Sciences Investments Pte Ltd at a purchase price of $15.29 per share in February and March 2002.

In addition, we issued:

- 545,434 shares of common stock and 95,690 shares of Series A preferred stock in exchange for all of the outstanding capital stock of CellGenEx, Inc. in August 1997 and April 1998; and
- 26,522 shares of Series B preferred stock in July 1998 and 20,000 shares of common stock in June 1999 in connection with license agreements.

In addition, as of December 31, 2003, warrants to purchase an aggregate of 133,334 shares of preferred stock issued since our inception remained outstanding, and warrants to purchase an aggregate of 907,317 shares of common stock issued in August 2000, November 2001, February 2002 and March 2002 remained outstanding.

Since our inception, we have engaged in transactions with our executive officers, directors and holders of more than 5% of our voting securities and their respective affiliates. The following table summarizes the number of shares of our stock purchased by our executive officers, directors and 5% stockholders and persons and entities associated with them in private placement transactions. Each share of each series of preferred stock converts automatically upon closing of this offering into one share of common stock.

Investor[1]	Common stock	Series A preferred stock	Series B preferred stock	Series C preferred stock	Series D preferred stock	Series E preferred stock	Series F preferred stock
Directors and executive officers							
Ronald J. Berenson, M.D.[2]	431,499	10,526	—	—	—	—	—
Robert M. Williams, Ph.D. .	36,363	—	—	—	—	—	—
Entities affiliated with directors							
Alta Partners[3]	—	344,496	146,414	176,604	106,280	63,941	1,460
ARCH Venture Partners[4]	—	143,539	371,900	203,502	240,352	170,045	163,473
Sprout Group[5]	—	478,466	99,172	207,814	58,861	64,741	660
MPM Capital[6]	87,899	—	—	—	784,825	130,802	—
5% stockholders							
Ronald J. Berenson, M.D.[2]	431,499	10,528	—	—	—	—	—
Alta Partners[3]	—	344,406	146,414	176,604	106,280	63,940	1,460
ARCH Venture Partners[4]	—	143,589	371,900	203,502	240,352	170,045	163,473
Sprout Group[5]	—	478,466	99,172	207,814	58,861	64,741	660
MPM Capital[6]	87,899	—	—		784,825	130,802	—
W Capital Partners Ironworks, L.P.[7]	—	—	—	326,620	52,004	54,836	—
Vector Fund	—	—	—	—	98,103	—	196,168
Vulcan Ventures	14,650	—	—	108,873	130,804	130,804	—

[1] See “Principal stockholders” for more details on shares held by these purchasers.
[2] Includes shares held in trust.
[3] Dr. Deleage is managing director of Alta Partners.
[4] Mr. Nelsen is a managing director of entities affiliated with ARCH Venture Partners.
[5] Dr. Curry is a consultant of Sprout Group.
[6] Dr. Henner is a general partner of MPM Capital.
[7] Mr. Wertheimer is a managing director of W Capital Partners.

In connection with our acquisition of all the outstanding capital stock of CellGenEx, we issued warrants to purchase 66,983 shares of Series A preferred stock at $5.23 per share in August 1997. In addition, in connection with our Series D preferred stock private placement, we issued warrants to purchase 205,858 shares of common stock at $1.65 per share in August 2000. In connection with our Series E preferred stock private placement, we issued warrants to purchase 470,205 shares of common stock at $0.055 per share in November 2001. In connection with our Series F preferred stock private placement, we issued warrants to purchase 439,932 shares of common stock at $0.055 per share in February and March 2002.

The following table summarizes the number of shares of common stock and preferred stock issuable pursuant to warrants granted to 5% stockholders, directors, executive officers and entities affiliated with our executive officers and directors in private placement transactions:

Investor[1]	Shares of common stock underlying warrants	Shares of Series A preferred stock underlying warrants
Alta Partners[2]	47,509	—
ARCH Venture Partners[3]	208,500	50,237
Sprout Group[4]	42,196	—
MPM Asset Management LLC[5]	71,214	—
W Capital Partners Ironworks, L.P.[6]	35,679	—
Vector Fund	125,011	—
Vulcan Ventures	71,215	—

[1] See “Principal stockholders” for more details on shares held by these purchasers.
[2] Dr. Deleage is managing director of Alta Partners.
[3] Mr. Nelsen is a managing director of entities affiliated with ARCH Venture Partners.
[4] Dr. Curry is a consultant of Sprout Group.
[5] Dr. Henner is a general partner of MPM Capital.
[6] Mr. Wertheimer is a managing director of W Capital Partners.

In July 1999, we entered into a License Agreement with Genecraft LLC, or Genecraft, of which Dr. Jeffrey Ledbetter, our former Chief Scientific Officer and one of our scientific founders, is a principal founder. Under this agreement, in return for royalties we granted an exclusive sublicense to Genecraft for the rights to several pending patent applications that we are not using in the field of *in vivo* activation of T cells.

We have entered into indemnification agreements with our officers and directors containing provisions which require us, among other things, to indemnify our officers and directors against liabilities that may arise by reason of their status or service as officers or directors (other than liabilities arising from willful and other misconduct) and to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified. See “Management—Limitations on liability and indemnification of officers and directors.”

We maintain key person life insurance, under which we are the beneficiary, on Dr. Berenson in the amount of $2 million.

In connection with our acquisition of all of the outstanding capital stock of CellGenEx, Inc., we reserved an aggregate of 287,698 shares of our common stock in a milestone pool for issuance to our scientific founders, Drs. Jeffrey Bluestone, Carl June, Jeffrey Ledbetter and Craig Thompson, upon the achievement of scientific milestones determined by a milestone committee. In February 2001, we entered into a settlement agreement with each of Drs. Bluestone, June and Thompson to terminate the milestone pool, and no option grants were made pursuant to the Milestone Pool. In addition, we entered into a consulting agreement with each of Drs. Bluestone, June and Thompson under which each agreed to consult with us and to continue to serve on our Scientific Advisory Board. In exchange for these services, each consultant was awarded non-statutory stock options for an aggregate of 22,727 shares of our common stock, consisting of one option to purchase 9,090 shares of our common stock at an exercise price of $2.75 per share and a second option to purchase 13,636 shares of our common stock at an exercise price of $5.50 per share. The 13,636 shares vest in equal monthly installments (284 shares per month) over the 48 month term of the agreement. Dr. Ledbetter, our former Chief Scientific Officer, waived his rights to the milestone pool in connection with his resignation in March 1999.

Dr. Frohlich’s employment agreement, dated August 27, 2001, provides that we will forgive over four years from the date of the agreement a $50,000 home loan made to him by the Company in connection with commencement of his employment.

Pursuant to a clinical trial agreement dated November 25, 2003, James R. Berenson, M.D., a brother of our President and Chief Executive Officer, has acted as and will continue to act as a principal investigator for some of our clinical trials run by a site management organization called Oncotherapeutics.

In October 2003, we issued and sold convertible promissory notes in an aggregate amount of approximately $12.7 million to investors, including, but not limited to, Alta Partners, ARCH Venture Partners, MPM Capital, The Sprout Group, Vector Partners, Vulcan Ventures and W Capital Partners Ironworks. These convertible promissory notes will be converted into approximately 1,339,943 shares of our common stock (as of December 31, 2003) upon completion of this offering.

In October 2003, in connection with the sale of convertible promissory notes, we issued to participants warrants to purchase shares of preferred stock issued in our next equity financing at the then applicable price per share. However, if we have not closed a qualifying equity financing, and we have not completed this initial public offering, on or before the maturity date of the convertible promissory notes, then the warrants will instead be exercisable for our Series F Preferred Stock at an exercise price of $15.29 per share (adjusted for stock splits and similar transactions). If we complete our initial public offering prior to the earlier of the next equity financing or April 2004, these warrants will not be exercisable on or prior to completion of this offering and will terminate upon completion of this offering.

PRINCIPAL STOCKHOLDERS

The following table shows information known to us with respect to the beneficial ownership of our common stock as of January 31, 2004 by:

- each of our directors;
- each named executive officer;
- each person or group of affiliated persons known by us to beneficially own more than 5% of our common stock; and
- all of our directors and executive officers as a group.

Beneficial ownership and percentage ownership are determined in accordance with the rules of the SEC. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of common stock underlying options and warrants that are exercisable within 60 days of January 31, 2004 are considered to be outstanding. To our knowledge, except as indicated in the footnotes to the following table and subject to community property laws where applicable, the persons named in this table have sole voting and investment power with respect to all shares of our common stock shown as beneficially owned by them.

The following table reflects the conversion of all 6,781,814 shares of our preferred stock outstanding as of January 31, 2004 into an aggregate of 6,781,814 shares of our common stock, which will become effective at the closing of this offering. This table is based on 8,328,438 shares of our common stock outstanding as of January 31, 2004 and 12,328,438 shares outstanding immediately after this offering. The address for those individuals for which an address is not otherwise indicated is: c/o Xcyte Therapies, Inc., 1124 Columbia Street, Suite 130, Seattle, Washington 98104.

Name and address of beneficial owner	Number of shares owned[1]	Number of shares underlying options or warrants	Percent of shares beneficially owned: Before this offering	Percent of shares beneficially owned: After this offering
Directors and named executive officers				
Ronald J. Berenson, M.D.[2]	442,025	44,695	5.8%	3.9%
Stewart Craig, Ph.D.	—	63,028	*	*
Mark Frohlich, M.D.	—	20,634	*	*
Kathi L. Cordova, C.P.A.[3]	13,636	12,665	*	*
Joanna S. Black, J.D.	—	10,226	*	*
Jean Deleage, Ph.D.[4] c/o Alta Partners One Embarcadero Center Suite 4050 San Francisco, CA 94111	839,196	52,963	10.6	7.2
Peter Langecker, M.D., Ph.D.	—	5,454	*	*
Robert T. Nelsen[5] c/o ARCH Venture Partners 8725 W. Higgins Road, Suite 290 Chicago, IL 60631	1,292,811	258,737	18.1	12.3
Robert E. Curry, Ph.D.[6] c/o The Sprout Group 3000 Sand Hill Road Building 1, Suite 170 Menlo Park, CA 94025	909,705	42,196	11.4	7.7
Dennis Henner, Ph.D.[7] c/o MPM Asset Management LLC 111 Huntington Avenue 31st Floor Boston, MA 02199	1,003,526	71,214	12.8	8.6
Stephen N. Wertheimer[8] c/o W Capital Partners 245 Park Avenue 39th Floor New York, NY 10167	433,460	35,679	5.6	3.7
Robert M. Williams, Ph.D.	36,363	8,181	*	*
All executive officers and directors as a group (13 persons)	4,970,721	640,094	62.6%	43.3
5% stockholders				
Alta Partners[4] One Embarcadero Center Suite 4050 San Francisco, CA 94111	839,196	52,963	10.6	7.2
Arch Venture Partners[5] 8725 W. Higgins Road, Suite 290 Chicago, IL 60631	1,292,811	258,737	18.1	12.3
The Sprout Group[6] 3000 Sand Hill Road Building 1, Suite 170 Menlo Park, CA 94025	909,705	42,196	11.4	7.7
MPM Capital[7] c/o MPM Asset Management LLC 111 Huntington Avenue 31st Floor Boston, MA 02199	1,003,526	71,214	12.8	8.6
W Capital Partners Ironworks, L.P.[8] 245 Park Avenue 39th Floor New York, NY 10167	433,460	35,679	5.6	3.7
Ronald J. Berenson, M.D.[2]	442,027	44,695	5.8	3.9
Vector Fund[9] 1751 Lake Cook Road Suite 350 Deerfield, IL 60015	333,510	71,215	5.4	3.6
Vulcan Ventures[10] 505 Orion Station 505 Fifth Avenue South Suite 900 Seattle, WA 98104	385,131	456,346	5.4	3.6

* Represents beneficial ownership of less than 1%.

(1) Shares of preferred stock are shown on an as-converted basis.
(2) Includes 393,141 shares of common stock, 30,207 of which are subject to repurchase, and 10,526 shares of Series A preferred stock held by Dr. Berenson; and 38,358 shares of common stock held by the Irrevocable Intervivos Trust Agreement of Ronald J. Berenson and Cheryl L. Berenson.
(3) Includes 13,636 shares of common stock.
(4) Includes 334,561 shares of Series A preferred stock, 143,144 shares of Series B preferred stock, 172,660 shares of Series C preferred stock, 103,907 shares of Series D preferred stock and 63,941 shares of Series E preferred stock held by Alta California Partners, L.P.; 46,449 shares of common stock issuable upon the exercise of immediately exercisable warrants held by Alta California Partners, L.P.; 9,936 shares of Series A preferred stock, 3,270 shares of Series B preferred stock, 3,944 shares of Series C preferred stock, 2,373 shares of Series D preferred stock and 1,460 shares of Series F preferred stock held by Alta Embarcadero Partners, L.L.C.; 1,060 shares of common stock issuable upon the exercise of immediately exercisable warrants held by Alta Embarcadero Partners, L.L.C.; and 5,454 shares of common stock issuable upon the exercise of immediately exercisable options held by Dr. Deleage, none of which are subject to a repurchase right. Dr. Deleage is a general partner of each of these partnerships, shares voting and dispositive power with respect to the shares held by each of these entities and disclaims beneficial ownership of the shares in which he has no pecuniary interest.
(5) Includes 114,832 shares of Series A preferred stock and 66,115 shares of Series B preferred stock held by ARCH Venture Fund II, L.P.; 28,707 shares of Series A preferred stock, 305,785 shares of Series B preferred stock, 203,502 shares of Series C preferred stock, 240,350 shares of Series D preferred stock and 170,045 shares of Series E preferred stock; 50,237 shares of Series A preferred stock and 119,498 shares of common stock issuable upon the exercise of immediately exercisable warrants held by ARCH Venture Fund III, L.P.; and 163,473 shares of Series F preferred stock and 89,002 shares of common stock issuable upon the exercise of immediately exercisable warrants held by Healthcare Focus Fund, L.P. Mr. Nelsen is a managing director of the general partner of the general partner of the general partner of ARCH Venture Fund II, L.P. Mr. Nelsen is a managing director of the general partner of ARCH Venture Fund III, L.P. Mr. Nelsen is a managing director of the general partner of the general partner of the Healthcare Focus Fund, L.P. Mr. Nelsen shares voting and dispositive power with respect to the shares held by each of these entities and disclaims beneficial ownership of the shares in which he has no pecuniary interest.
(6) Includes 9,569 shares of Series A preferred stock, 1,983 shares of Series B preferred stock, 4,156 shares of Series C preferred stock, 1,177 shares of Series D preferred stock and 1,308 shares of Series E preferred stock held by DLJ Capital Corporation; 843 shares of common stock issuable upon the exercise of immediately exercisable warrants held by DLJ Capital Corporation; 47,846 shares of Series A preferred stock, 9,917 shares of Series B preferred stock, 20,780 shares of Series C preferred stock, 5,886 shares of Series D preferred stock and 6,540 shares of Series E preferred stock held by DLJ First ESC, L.P.; 4,219 shares of common stock issuable upon the exercise of immediately exercisable warrants held by DLJ First ESC, L.P.; 416,217 shares of Series A preferred stock, 86,270 shares of Series B preferred stock, 180,770 shares of Series C preferred stock, 51,204 shares of Series D preferred stock and 56,893 shares of Series E preferred stock held by Sprout Capital VII, L.P.; 36,709 shares of common stock issuable upon the exercise of immediately exercisable warrants held by Sprout Capital VII, L.P.; 4,834 shares of Series A preferred stock, 1,002 shares of Series B preferred stock, 2,099 shares of Series C preferred stock, 594 shares of Series D preferred stock and 660 shares of Series F preferred stock held by the Sprout CEO Fund, L.P.; and 425 shares of common stock issuable upon the exercise of immediately exercisable warrants held by the Sprout CEO Fund, L.P. Dr. Curry is a general partner of each of these partnerships, shares voting and dispositive power with respect to the shares held by of these entities and disclaims beneficial ownership of the shares in which he has no pecuniary interest.
(7) Includes 1,362 shares of common stock, 12,164 shares of Series D preferred stock and 2,027 shares of Series E preferred stock held by MPM Asset Management Investors 2000 B, LLC; 1,103 shares of common stock issuable upon the exercise of immediately exercisable warrants held by MPM Asset Management Investors 2000 B, LLC; 20,832 shares of common stock, 186,004 shares of Series D preferred stock and 31,000 shares of Series E preferred stock held by MPM Bioventures GMBH & Co. Parallel-Beteiligungs KG; 16,878 shares of common stock issuable upon the exercise of immediately exercisable warrants held by MPM Bioventures GMBH & Co. Parallel-Beteiligungs KG.; 6,531 shares of common stock, 58,312 shares of Series D preferred stock and 9,718 shares of Series E preferred stock held by MPM Bioventures II, L.P.; 5,291 shares of common stock issuable upon the exercise of immediately exercisable warrants held by MPM Bioventures II, L.P.; 59,174 shares of common stock, 528,345 shares of Series D preferred stock and 88,057 shares of Series E preferred stock held by MPM Bioventures II-QP, L.P.; and 47,942 shares of common stock issuable upon the exercise of immediately exercisable warrants held by MPM Bioventures II-QP, L.P. Dr. Henner is a general partner of each of these entities, shares voting and dispositive power with respect to the shares held by each of these entities and disclaims beneficial ownership of the shares in which he has no pecuniary interest.
(8) Includes 326,620 shares of Series C preferred stock, 52,004 shares of Series D preferred stock and 54,836 shares of Series E preferred stock held by W Capital Partners Ironworks, L.P., and 35,679 shares of common stock issuable upon the exercise of immediately exercisable warrants held by W Capital Partners Ironworks, L.P. Mr. Wertheimer is the managing director of W Capital Partners Ironworks, L.P., shares voting and dispositive power with respect to this partnership and disclaims beneficial ownership of the shares in which he has no pecuniary interest.
(9) Includes 98,103 shares of Series D preferred stock, 147,126 shares of Series F preferred stock and 91,089 shares of common stock issuable upon the exercise of immediately exercisable warrants held by Vector Later-Stage Equity Fund II (QP) LP.; 32,701 shares of Series D preferred stock, 49,042 shares of Series F preferred stock and 30,362 shares of common stock issuable upon the exercise of immediately exercisable warrants held by Vector Later-Stage Equity Fund II L.P.; and 6,538 shares of Series F preferred stock and 3,560 shares of common stock issuable upon the exercise of immediately exercisable warrants held by Palivacinni Partners, LLC. The general partner of Vector Later-Stage Equity Fund II, L.P. and Vector Later-Stage Equity Fund II (QP) L.P. is Vector Fund Management, L.L.C., which has appointed Vector Fund Management, L.P. as the manager of the shares. There is no single person at the funds that exercises voting or investment control over the shares held by the funds. Voting and investment control over the shares is held by an internal investment committee of Vector Fund Management, L.P.
(10) Includes 14,650 shares of common stock, 108,873 shares of Series C preferred stock, 130,804 shares of Series D preferred stock and 130,804 shares of Series E preferred stock held by Vulcan Ventures, Inc.; and 71,215 shares of common stock issuable upon the exercise of immediately exercisable warrants held by Vulcan Ventures, Inc. Paul G. Allen has investment and voting control over of these shares.

DESCRIPTION OF CAPITAL STOCK

General

Our amended and restated certificate of incorporation, which will become effective upon the closing of this offering, authorizes the issuance of up to 100,000,000 of common stock, par value $0.001 per share, and 5,000,000 shares of preferred stock, par value $0.001 per share. The rights and preferences of the preferred stock may be established from time to time by our board of directors. As of December 31, 2003, 1,546,624 shares of common stock were issued and outstanding and 6,781,814 shares of preferred stock convertible into 6,781,814 shares of common stock upon the completion of this offering were issued and outstanding. As of December 31, 2003, we had 81 common stockholders of record and 44 preferred stockholders of record.

Immediately after the closing of this offering, we will have approximately 14,599,270 shares of common stock outstanding, which is based on 10,599,270 shares of our common stock outstanding as of December 31, 2003, after giving effect to:

- the conversion of all 6,781,814 shares of our preferred stock outstanding as of December 31, 2003 into 6,781,814 shares of our common stock, which will become effective at the closing of this offering;
- the net exercise of warrants outstanding as of December 31, 2003, which will expire at the closing of this offering, to purchase 907,317 shares of our common stock with a weighted average exercise price of $0.30 per share, resulting in the issuance of 888,139 shares of common stock, assuming an initial public offering price of $14 per share;
- the conversion of shares of our preferred stock issuable upon the net exercise of warrants outstanding as of December 31, 2003, which will expire at the closing of this offering, to purchase 86,727 shares of our preferred stock with a weighted average exercise price of $7.36 per share, resulting in the issuance of 42,750 shares of common stock, assuming an initial public offering price of $14 per share; and
- the conversion of the convertible promissory notes we issued in October 2003 for net proceeds of approximately $12.7 million into approximately 1,339,943 shares of our common stock, which includes the conversion of approximately $177,000 in accrued interest as of December 31, 2003, and the recognition of approximately $12.4 million in interest expense associated with the discount on the notes, which will become effective upon the closing of this offering.

The description below gives effect to the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws and is qualified in its entirety by reference to these documents, copies of which are filed as exhibits to the registration statement of which this prospectus is a part.

Common Stock

Each holder of common stock is entitled to one vote for each share on all matters to be voted upon by the stockholders, and there are no cumulative voting rights. Subject to preferences to which holders of preferred stock issued after the sale of the common stock being offered may be entitled, holders of common stock are entitled to receive ratably those dividends, if any, that may be declared from time to time by our board of directors out of funds legally available for the payment of dividends. In the event of a liquidation, dissolution or winding up of us, holders of our common stock would be entitled to share in our assets remaining after the payment of liabilities and the satisfaction of any liquidation preference that may be granted to holders of any outstanding shares of preferred stock. Holders of our common stock have no preemptive or conversion rights or other subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. All outstanding shares of common stock are, and the shares of common stock offered by us in this offering, when issued and paid for, will be, fully paid and nonassessable. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock which we may designate in the future.

Preferred Stock

Upon the closing of this offering, our board of directors will be authorized, subject to any limitations prescribed by law, without stockholder approval, to issue from time to time up to an aggregate of 5,000,000 shares of preferred stock in one or more series. Each series of preferred stock will have the rights and preferences, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, as our board of directors determines. The issuance of preferred stock could adversely affect the voting power of holders of our common stock and the likelihood that holders of our common stock will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, a majority of our outstanding voting stock. We have no present plans to issue any shares of preferred stock.

Warrants

As of December 31, 2003, the following warrants were outstanding:

- warrants that expire between July 2006 and February 2009 to purchase at a weighted average exercise price of $7.94 per share an aggregate of 46,607 shares of our preferred stock, which are convertible into an aggregate of 46,607 shares of common stock;
- warrants that will expire upon the closing of this offering to purchase an aggregate of 86,727 shares of our preferred stock at a weighted average exercise price of $7.36 per share; and
- warrants that will expire upon the closing of this offering to purchase an aggregate of 907,317 shares of our common stock at a weighted average exercise price of $0.30 per share.

Registration Rights

We and the holders of our preferred stock, certain holders of warrants to purchase our preferred stock and certain holders of our common stock entered into an investor rights agreement, dated May 25, 2000, as amended on August 8, 2000, October 18, 2000, November 13, 2001, February 5, 2002, May 22, 2002 and October 9, 2003. This investors rights agreement provides these holders with customary demand and piggyback registration rights with respect to the shares of common stock held by them and common stock to be issued upon conversion or exercise of preferred stock and warrants held by them. In addition, the holders of our preferred stock are entitled to receive quarterly and annual financial statements, subject to certain conditions and limitations.

Demand Registration

According to the terms of the investor rights agreement, assuming the exercise of all warrants that terminate upon the closing and including the issuance of approximately 1,339,943 shares of our common stock (as of December 31, 2003) pursuant to convertible promissory notes, the holders of 9,143,313 shares of our common stock or warrants to purchase shares of our common stock have the right to require us to register their shares with the SEC for resale to the public. To demand such a registration, holders who hold together an aggregate of at least 50% of the shares having registration rights must request a registration statement to register shares for an aggregate offering price of at least $10 million, net of underwriting discounts and commissions. We are not required to effect more than two demand registrations. We have currently not effected, or received a request for, any demand registrations. We may defer the filing of a demand registration statement for a period of up to 90 days once in any 12-month period.

Piggyback Registration

If we file a registration statement for a public offering of any of our securities solely for cash, other than a registration statement relating solely to our stock plans, the holders of demand registration rights will have the right to include their shares in the registration statement.

Form S-3 Registration

At any time after we become eligible to file a registration statement on Form S-3, holders of shares of common stock having demand and piggyback registration rights may require us to file a Form S-3 registration statement.

We are obligated to file only one Form S-3 registration statement in any six-month period. Furthermore, the aggregate offering proceeds of the requested Form S-3 registration, before deducting underwriting discounts and expenses, must be at least $500,000. We may defer one registration request for 120 days in any 12-month period.

These registration rights are subject to certain conditions and limitations, including the right of the underwriters of an offering to limit the number of shares of common stock to be included in the registration. We are generally required to bear the expenses of all registrations, except underwriting discounts and commissions. However, we will not pay for any expenses of any demand registration if the request is subsequently withdrawn by the holders of a majority of the securities to be registered unless such holders forfeit their right to one demand registration. The investors rights agreement also contains our commitment to indemnify the holders of registration rights for losses attributable to statements or omissions by us incurred with registrations under the agreement. The registration rights terminate five years after the closing of this offering.

Anti-Takeover Effects of Provisions of Our Amended and Restated Certificate of Incorporation and Bylaws and Delaware and Washington Law

Provisions of our amended and restated certificate of incorporation and bylaws, which will become effective upon the closing of this offering, may have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, control of us. These provisions could limit the price that investors might be willing to pay in the future for shares of our common stock. Our amended and restated bylaws and certificate of incorporation eliminate the right of stockholders to call special meetings of stockholders or to act by written consent without a meeting and require advance notice for stockholder proposals and director nominations, which may preclude stockholders from bringing matters before an annual meeting of stockholders or from making nominations for directors at an annual meeting of stockholders. The authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control of us or our management. In addition, we are subject to Section 203 of the Delaware General Corporation Law, which, subject to certain exceptions, generally prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the time that such stockholder became an interested stockholder, unless:

- prior to the business combination, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (but not the shares owned by the interested stockholder):
  - shares owned by persons who are directors and also officers; and
  - shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or after the time of the business combination, the business combination is:
  - approved by our board of directors; and
  - authorized at an annual or special meeting of our stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of our outstanding voting stock which is not owned by the interested stockholder.

In general, the Delaware General Corporation Law defines an interested stockholder to be an entity or person that beneficially owns 15% or more of the outstanding voting stock of the corporation or any entity or person that is an affiliate or associate of such entity or person.

The Delaware General Corporation Law generally defines business combination to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, exchange, mortgage, pledge, transfer or other disposition of 10% or more of the assets of the corporation or its majority-owned subsidiary that involves interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to certain exceptions, any transaction involving the corporation that has the effect of increasing the interested stockholder's proportionate share of the stock of any class or series of the corporation; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

The laws of the State of Washington, where our principal executive offices are located, impose restrictions on certain transactions between certain foreign corporations and significant stockholders. Chapter 23B.19 of the Washington Business Corporation Act, or the WBCA, generally prohibits a target corporation, with certain exceptions, from engaging in certain significant business transactions with an acquiring person for a period of five years after the acquiring person first became an acquiring person, unless the transaction or the purchase of shares by the acquiring person is approved by a majority of the members of the target corporation's board of directors prior to the time the acquiring person first became an acquiring person. An acquiring person is generally a person or group of persons who beneficially owns 10% or more of the voting securities of the target corporation. Prohibited transactions include, among other things:

- a merger or consolidation with, disposition of assets to, or issuance or redemption of stock to or from, the acquiring person;
- termination of 5% or more of the employees of the target corporation as a result of the acquiring person's acquisition of 10% or more of the shares of the target corporation; and
- allowing the acquiring person to receive a disproportionate benefit as a stockholder;

After the five-year period, a significant business transaction may take place as long as it complies with certain fair price provisions of the statute. A target corporation includes a foreign corporation if:

- the corporation has a class of voting shares registered pursuant to Sections 12 or 15 of the Securities Exchange Act of 1934, as amended;
- the corporation's principal executive office is located in Washington;
- the corporation has either:
  - more than 10% of its stockholders of record resident in Washington;
  - more than 10% of its shares owned of record by Washington residents; or
  - 1,000 or more stockholders of record resident in Washington;
- a majority of the corporation's employees are Washington residents or more than 1,000 Washington residents are employees of the corporation; and
- a majority of the corporation's tangible assets are located in Washington or the corporation has more than $50 million of tangible assets located in Washington.

Because a corporation may not opt out of this statute, we anticipate this statute will apply to us. Depending on whether we meet the definition of a target corporation, Chapter 23B.19 of the WBCA may have the effect of delaying, deterring or preventing a change in control of us.

Nasdaq National Market Listing

We have applied to have our common stock approved for quotation on The Nasdaq National Market under the symbol “XCYT.”

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer and Trust Company. Its address is 59 Maiden Lane, New York, NY 10038, and its telephone number is (212) 936-5100.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock. Future sales of substantial amounts of our common stock in the public market, or the perception that these sales could occur, could adversely affect the price of our common stock.

Based on the number of shares outstanding as of December 31, 2003, we will have approximately 14,599,270 shares of our common stock outstanding after the completion of this offering (approximately 15,199,270 shares if the underwriters exercise their overallotment option in full). Of those shares, the 4,000,000 shares of common stock sold in this offering (4,600,000 shares if the underwriters exercise their overallotment option in full) will be freely transferable without restriction, unless purchased by our affiliates. The remaining 10,599,270 shares of common stock to be outstanding immediately following the completion of this offering, which are "restricted securities" under Rule 144 of the Securities Act of 1933, or Rule 144, as well as any other shares held by our affiliates, may not be resold except pursuant to an effective registration statement or an applicable exemption from registration, including an exemption under Rule 144.

All of our officers and directors, and substantially all security holders have entered into lock-up agreements pursuant to which they have generally agreed, subject to certain exceptions, not to offer or sell any shares of common stock or securities convertible into or exchangeable or exercisable for shares of common stock for a period of 180 days from the date of this prospectus without the prior written consent of Piper Jaffray & Co. See "Underwriting."

After the offering, the holders of 9,143,313 shares of our common stock will be entitled to registration rights. For more information on these registration rights, see "Description of capital stock—Registration rights."

In general, under Rule 144, as currently in effect, an affiliate of ours who beneficially owns shares of our common stock that are not restricted securities, or a person who beneficially owns for more than one year shares of our common stock that are restricted securities, may generally sell, within any three-month period, a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately 145,809 shares immediately after this offering; and
- the average weekly trading volume of our common stock on The Nasdaq National Market during the four preceding weeks.

Sales under Rule 144 are also subject to requirements with respect to manner of sale, notice and the availability of current public information about us. Generally, a person who was not our affiliate at any time during the three months before the sale, and who has beneficially owned shares of our common stock that are restricted securities for at least two years, may sell those shares without regard to the volume limitations, manner of sale restrictions, notice requirements or the requirements with respect to availability of current public information about us.

Generally, an employee, officer, director or consultant who purchased shares of our common stock before the effective date of the registration statement of which this prospectus is a part, or who holds options as of that date, pursuant to a written compensatory plan or contract may rely on the resale provisions of Rule 701 under the Securities Act. Under Rule 701, these persons who are not our affiliates may generally sell their eligible securities, commencing 90 days after the effective date of the registration statement of which this prospectus is a part, without having to comply with the public information, holding period, volume limitation or notice provisions of Rule 144. These persons who are our affiliates may generally sell their eligible securities under Rule 701, commencing 90 days after the effective date of the registration statement of which this prospectus is a part, without having to comply with Rule 144's one-year holding period restriction.

Neither Rule 144 nor Rule 701 supersedes the contractual obligations of our security holders set forth in the lock-up agreements described above.

The 10,559,270 shares of our common stock that were outstanding on December 31, 2003 as adjusted to reflect the conversion of our preferred stock in connection with this initial public offering will become eligible for sale, pursuant to Rule 144 or Rule 701, without registration approximately as follows:

- 9,177,569 shares of common stock will be immediately eligible for sale in the public market without restriction;
- 64,963 shares of common stock will be eligible for sale in the public market under Rule 144 or Rule 701, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject to the volume, manner of sale and other limitations under those rules; and
- the remaining 1,356,738 shares of common stock will become eligible under Rule 144 for sale in the public market from time to time after the effective date of the registration statement of which this prospectus is a part upon expiration of their respective holding periods.

The above does not take into consideration the effect of the lock-up agreements described above.

Stock Options

We have reserved an aggregate of 1,163,636 shares of our common stock for issuance under our 1996 Stock Option Plan, 636,363 shares of our common stock for issuance under our 2003 Stock Plan, 90,909 shares of our common stock for issuance under our 2003 Directors' Stock Option Plan and 109,090 shares of our common stock for issuance under our 2003 Employee Stock Purchase Plan. As of December 31, 2003, we had outstanding options under our 1996 Stock Option Plan to purchase 717,615 shares of our common stock. We intend to register the shares subject to these plans and the options on a registration statement under the Securities Act of 1933 on Form S-8 following this offering. Subject to the lock-up agreements, the restrictions imposed under the 1996 Stock Option Plan, the 2003 Stock Plan, the 2003 Directors' Stock Option Plan, the 2003 Employee Stock Purchase Plan and related option agreements, shares of common stock issued under these plans or agreements after the effective date of any registration statement on Form S-8 will be available for sale in the public market without restriction to the extent that they are held by persons who are not our affiliates.

UNDERWRITING

We are offering the shares of our common stock described in this prospectus through the underwriters named below. Piper Jaffray & Co., RBC Capital Markets Corporation, Wells Fargo Securities, LLC and JMP Securities LLC are the representatives of the underwriters. We have entered into an underwriting agreement with the representatives. Subject to the terms and conditions of the underwriting agreement, each of the underwriters has severally agreed to purchase the number of shares of common stock listed next to its name in the following table:

Underwriters	Number of shares
Piper Jaffray & Co.	
RBC Capital Markets Corporation	
Wells Fargo Securities, LLC	
JMP Securities LLC	
Total	

The underwriting agreement provides that the underwriters must buy all of the shares if they buy any of them. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below.

Our common stock is offered subject to a number of conditions, including:

- receipt and acceptance of our common stock by the underwriters; and
- the underwriters' right to reject orders in whole or in part.

In connection with this offering, certain of the underwriters or securities dealers may distribute prospectuses electronically.

Over-Allotment Option

We have granted the underwriters an option to buy up to an aggregate of 600,000 additional shares of our common stock. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with this offering. The underwriters have 30 days from the date of this prospectus to exercise this option. If the underwriters exercise this option, they will each purchase additional shares approximately in proportion to the amounts specified in the table above.

Commissions and Discounts

Shares sold by the underwriters to the public will initially be offered at the offering price set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the public offering price. Any of these securities dealers may resell any shares purchased from the underwriters to other brokers or dealers at a discount of up to $ per share from the public offering price. If all the shares are not sold at the public offering price, the representatives may change the offering price and the other selling terms. Sales of shares made outside of the United States may be made by affiliates of the underwriters.

The underwriters have informed us that they do not expect discretionary sales to exceed 5% of the shares of common stock to be offered.

The following table shows the per share and total underwriting discounts and commissions we will pay to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional shares.

	No exercise	Full exercise
Per share	$	$
Total	$	$

We estimate that the total expenses of this offering payable by us, not including the underwriting discounts and commissions, will be approximately .

No Sales of Similar Securities

We, our executive officers and directors and substantially all of our existing stockholders have entered into lock-up agreements with the underwriters. Under these agreements, we and each of these persons generally may not, without the prior written approval of Piper Jaffray & Co., offer, sell, contract to sell or otherwise dispose of directly or indirectly or hedge our common stock or securities convertible into or exchangeable for or exercisable for our common stock, subject to certain exceptions. These restrictions will be in effect for a period of 180 days after the date of this prospectus. At any time and without public notice, Piper Jaffray & Co. may, in their sole discretion, release some or all of the securities from these lock-up agreements.

Indemnification and Contribution

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act. If we are unable to provide this indemnification, we will contribute to payments the underwriters may be required to make in respect of those liabilities.

Nasdaq National Market Quotation

We have applied to have our common stock approved for quotation on The Nasdaq National Market under the trading symbol "XCYT."

Price Stabilization, Short Positions

In connection with this offering, the underwriters may engage in activities that stabilize, maintain or otherwise affect the price of our common stock, including:

- stabilizing transactions;
- short sales;
- purchases to cover positions created by short sales;
- imposition of penalty bids; and
- syndicate covering transactions.

Stabilizing transactions consist of bids or purchases made for the purpose of preventing or retarding a decline in the market price of our common stock while this offering is in progress. These transactions may also include making short sales of our common stock, which involve the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering and purchasing shares of common stock in the open market to cover positions created by short sales. Short sales may be "covered short sales," which are short positions in an amount not greater than the underwriters' over-allotment option referred to above, or may be "naked short sales," which are short positions in excess of that amount.

The underwriters may close out any covered short position by either exercising their over-allotment option, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will

consider, among other things, the price of shares available for purchase in the open market compared to the price at which they may purchase shares through the over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchased in this offering.

The underwriters also may impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of that underwriter in stabilizing or short covering transactions.

As a result of these activities, the price of our common stock may be higher that the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the underwriters at any time. The underwriters may carry out these transactions on The Nasdaq National Market, in the over-the-counter market or otherwise.

Determination of Offering Price

Prior to this offering, there was no public market for our common stock. The initial public offering price will be determined by negotiation by us and the representatives of the underwriters. The principal factors to be considered in determining the initial public offering price include:

- the information set forth in this prospectus and otherwise available to representatives;
- our history and prospects and the history of, and prospects for, the industry in which we compete;
- our past and present financial performance and an assessment of our management;
- our prospects for future earnings and the present state of our development;
- the general condition of the securities markets at the time of this offering;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies; and
- other factors deemed relevant by the underwriters and us.

Directed Share Program

At our request, certain of the underwriters have reserved up to 5% of the common stock being offered by this prospectus for sale at the initial public offering price to our directors, officers, employees and other individuals associated with us and members of their families. The sales will be made by Piper Jaffray & Co. through a directed share program. We do not know if these persons will choose to purchase all or any portion of these reserved shares, but any purchases they do make will reduce the number of shares available to the general public. These persons must commit to purchase no later than the close of business on the day following the date of this prospectus. Any employees or other persons purchasing these reserved shares will be prohibited from disposing of or hedging the shares for a period of at least 180 days after the date of this prospectus.

Affiliations

Certain of the underwriters and their affiliates have in the past provided and may from time to time provide certain commercial banking, financial advisory, investment banking and other services for us for which they were and will be entitled to receive separate fees.

The underwriters and their affiliates may from time to time in the future engage in transactions with us and perform services for us in the ordinary course of their business.

LEGAL MATTERS

The validity of the common stock we are offering will be passed upon for us by Heller Ehrman White & McAuliffe LLP, Seattle, Washington. Cooley Godward LLP, Palo Alto, California, is counsel for the underwriters in connection with this offering. As of the date of this prospectus, an investment partnership affiliated with Cooley Godward LLP beneficially owns an aggregate of 4,784 shares of our Series A preferred stock. These shares of Series A preferred stock will convert into 4,784 shares of our common stock upon completion of this offering. Both an investment entity affiliated with Heller Ehrman White & McAuliffe LLP and individual attorneys of Heller Ehrman White & McAuliffe LLP beneficially own an aggregate of 201 shares of our common stock, 2,942 shares of our Series D preferred stock and warrants to purchase 292 shares of our common stock. These shares of Series D preferred stock will convert into 2,942 shares of our common stock upon completion of this offering.

EXPERTS

The financial statements of Xcyte Therapies, Inc. at December 31, 2002 and 2003, and for each of the three years in the period ended December 31, 2003 and for the period from inception (January 5, 1996) to December 31, 2003, appearing in this prospectus and registration statement have been audited by Ernst & Young LLP, independent auditors, as set forth in their report thereon (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the financial statements) appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act of 1933 with respect to the shares of common stock we are offering. This prospectus does not contain all of the information in the registration statement and the exhibits to the registration statement. For further information with respect to us and our common stock, we refer you to the registration statement and to the exhibits to the registration statement. Statements contained in this prospectus about the contents of any contract or any other document are not necessarily complete, and, in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You may read and copy the registration statement of which this prospectus is a part at the SEC's Public Reference Room, which is located at 450 Fifth Street, N.W., Washington, D.C. 20549. You can request copies of the registration statement by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the SEC's Public Reference Room. In addition, the SEC maintains an Internet website, which is located at *www.sec.gov*, that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. You may access the registration statement of which this prospectus is a part at the SEC's Internet website. Upon completion of this offering, we will be subject to the information reporting requirements of the Securities Exchange Act of 1934, and we will file reports, proxy statements and other information with the SEC.

We maintain an Internet website at *www.xcytetherapies.com*. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

This prospectus includes statistical data that were obtained from industry publications. These industry publications generally indicate that the authors of these publications have obtained information from sources believed to be reliable but do not guarantee the accuracy and completeness of their information. While we believe these industry publications to be reliable, we have not independently verified their data.

INDEX TO FINANCIAL STATEMENTS

REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

The Board of Directors
Xcyte Therapies, Inc.

We have audited the accompanying balance sheets of Xcyte Therapies, Inc. (a development stage company) (the Company) as of December 31, 2002 and 2003, and the related statements of operations, stockholders' deficit and cash flows for each of the three years in the period ended December 31, 2003 and for the period from inception (January 5, 1996) to December 31, 2003. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Xcyte Therapies, Inc. (a development stage company) at December 31, 2002 and 2003, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2003 and for the period from inception (January 5, 1996) to December 31, 2003, in conformity with accounting principles generally accepted in the United States.

As discussed in Note 1 to the financial statements, the Company's recurring losses from operations and net capital deficiency raise substantial doubt about its ability to continue as a going concern. Management's plans as to these matters are also described in Note 1. The 2003 financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Ernst & Young LLP

Seattle, Washington
January 23, 2004,
except for the first paragraph of Note 13,
as to which the date is February xx, 2004

The foregoing report is in the form that will be signed upon the completion of the reverse stock split, described in Note 13 to the financial statements.

/s/ Ernst & Young LLP

Seattle, Washington
February 13, 2004

XCYTE THERAPIES, INC.
(a development stage company)
BALANCE SHEETS

(in thousands, except share and per share data)	December 31, 2002	December 31, 2003	Pro forma stockholders' equity at December 31, 2003 (Note 13) (unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 3,728	$ 2,241	
Short-term investments	13,616	11,299	
Prepaid expenses and other current assets	598	519	
Total current assets	17,942	14,059	
Property and equipment, net	2,613	2,767	
Deposits and other assets	879	1,672	
Total assets	$ 21,434	$ 18,498	
Liabilities and stockholders' equity (deficit)			
Current liabilities:			
Accounts payable	$ 595	$ 954	
Accrued compensation and related benefits	339	405	
Other accrued liabilities	721	856	
Convertible promissory notes	—	11,652	
Current portion of equipment financings	717	845	
Total current liabilities	2,372	14,712	
Equipment financings, less current portion	1,052	993	
Other liabilities	462	562	
Commitments and contingencies			
Redeemable convertible preferred stock, Issued and outstanding— 6,773,298 and 6,781,814 shares as of December 31, 2002 and December 31, 2003, respectively (no shares, pro forma)			
Aggregate preference in liquidation—$76,475 and $76,520 at December 31, 2002 and December 31, 2003, respectively	64,540	64,604	
Redeemable convertible preferred stock warrants	1,133	2,467	
Stockholders' equity (deficit):			
Preferred stock, $0.001 par value per share			
Authorized—42,000,000 shares (5,000,000 shares, pro forma)			
Designated redeemable and convertible—41,909,976 shares (no shares issued and outstanding pro forma)		—	$ —
Common stock, par value $0.001 per share			
Authorized—70,000,000 shares (100,000,000 shares, pro forma)			
Issued and outstanding—1,523,867 and 1,546,624 shares as of December 31, 2002 and December 31, 2003, respectively (9,668,390 shares, pro forma)	2	2	10
Additional paid-in capital	21,887	24,532	115,830
Deferred stock compensation	(1,880)	(2,774)	(2,774)
Accumulated other comprehensive income (loss)	4	(5)	(5)
Deficit accumulated during the development stage	(68,138)	(86,595)	(99,001)
Total stockholders' equity (deficit)	$ (48,125)	$ (64,840)	$ 14,060
Total liabilities and stockholders' equity (deficit)	$ 21,434	$ 18,498	

The accompanying notes are an integral part of these financial statements.

XCYTE THERAPIES, INC.
(a development stage company)

STATEMENTS OF OPERATIONS

	Year ended December 31,			Period from inception (January 5, 1996) to December 31, 2003
	2001	2002	2003	
	(in thousands, except per share data)			
Revenue:				
License fee	$ —	$ —	$ —	$ 100
Collaborative agreement	—	—	170	170
Government grant	30	—	—	144
Total revenue	30	—	170	414
Operating expenses:				
Research and development	14,701	14,663	13,685	66,825
General and administrative	5,204	4,979	4,322	21,451
Total operating expenses	19,905	19,642	18,007	88,276
Loss from operations	(19,875)	(19,642)	(17,837)	(87,862)
Other income (expense):				
Interest income	698	467	149	3,472
Interest expense	(260)	(267)	(768)	(2,010)
Loss on sale of equipment	(75)	(11)	(1)	(195)
Other income (expense), net	363	189	(620)	1,267
Net loss	(19,512)	(19,453)	(18,457)	(86,595)
Accretion of preferred stock	(8,411)	(8,001)	—	(16,412)
Net loss applicable to common stockholders	$ (27,923)	$ (27,454)	$ (18,457)	$ (103,007)
Basic and diluted net loss per common share	$ (22.14)	$ (19.34)	$ (12.40)	
Shares used in computation of basic and diluted net loss per common share	1,261,089	1,419,755	1,488,218	

The accompanying notes are an integral part of these financial statements.

XCYTE THERAPIES, INC.
(a development stage company)
STATEMENTS OF CHANGES IN STOCKHOLDERS' DEFICIT

	Common stock		Additional paid-in capital	Deferred stock compensation	Accumulated other comprehensive income (loss)	Deficit accumulated during the development stage	Total
	Shares	Amount					
	(in thousands, except share data)						
Common stock issued upon incorporation	613,564	$ 1	$ 2	$ —	$ —	$ —	$ 3
Deferred stock-based compensation	—	—	7	(7)	—	—	—
Amortization of deferred compensation	—	—	—	2	—	—	2
Common stock issued August 1996 for technology license, valued at $0.0055 per share	36,110	—	—	—	—	—	—
Net loss		—	—	—	—	(551)	(551)
Balance at December 31, 1996	649,674	1	9	(5)	—	(551)	(546)
Common stock repurchases	(115,454)	—	(1)	—	—	—	(1)
Common stock issued August 1997 in acquisition, valued at $0.61 per share	545,434	—	330	—	—	—	330
Deferred stock-based compensation	—	—	9	(9)	—	—	—
Amortization of deferred compensation	—	—	—	4	—	—	4
Common stock issued January 1997 for technology license, valued at $0.0055 per share	74,033	—	1	—	—	—	1
Stock options exercised	2,317	—	1	—	—	—	1
Net loss	—	—	—	—	—	(3,288)	(3,288)
Balance at December 31, 1997	1,156,004	1	349	(10)	—	(3,839)	(3,499)
Repurchase of founder's stock	(16,098)	—	—	—	—	—	—
Stock options exercised	45	—	—	—	—	—	—
Deferred stock-based compensation	—	—	8	(8)	—	—	—
Amortization of deferred compensation	—	—	—	6	—	—	6
Net loss	—	—	—	—	—	(5,446)	(5,446)
Balance at December 31, 1998	1,139,951	1	357	(12)	—	(9,285)	(8,939)
Common stock returned for technology license termination	(72,726)	—	—	—	—	—	—
Common stock issued June 1999 for technology license, valued at $0.55 per share	3,636	—	2	—	—	—	2
Deferred stock-based compensation	—	—	720	(720)	—	—	—
Amortization of deferred compensation	—	—	—	93	—	—	93
Stock options exercised	9,769	—	5	—	—	—	5
Change in unrealized loss on investments	—	—	—	—	(18)	—	(18)
Net loss	—	—	—	—	—	(6,947)	(6,947)
Comprehensive loss							(6,965)
Balance at December 31, 1999	1,080,630	1	1,084	(639)	(18)	(16,232)	(15,804)
Common stock issued December 2000 for technology license, valued at $27.28 per share	27,272	—	744	—	—	—	744
Issuance of common stock warrants	—	—	2,716	—	—	—	2,716
Deferred stock-based compensation	—	—	1,988	(1,988)	—	—	—
Amortization of deferred compensation	—	—	—	770	—	—	770
Remeasurement and issuance of stock options in exchange for consulting services	—	—	112	—	—	—	112
Stock options exercised	128,922	—	228	—	—	—	228
Change in unrealized loss on investments	—	—	—	—	18	—	18
Net loss	—	—	—	—	—	(12,941)	(12,941)
Comprehensive loss							(12,923)
Balance at December 31, 2000	1,236,824	1	6,872	(1,857)	—	(29,173)	(24,157)
Common stock repurchased	(2,424)	—	(2)	—	—	—	(2)
Warrants issued November 2001 and beneficial conversion in preferred stock	—	—	13,060	—	—	—	13,060
Deferred stock-based compensation	—	—	1,652	(1,652)	—	—	—
Amortization of deferred compensation	—	—	—	1,445	—	—	1,445
Remeasurement and issuance of stock options in exchange for consulting services	—	—	1,122	—	—	—	1,122
Stock options and warrants exercised	117,807	—	195	—	—	—	195
Accretion of redeemable convertible preferred stock	—	—	(8,411)	—	—	—	(8,411)
Net loss and comprehensive loss	—	—	—	—	—	(19,512)	(19,512)
Balance at December 31, 2001	1,352,207	$ 1	$ 14,488	$ (2,064)	$ —	$ (48,685)	$ (36,260)

The accompanying notes are an integral part of these financial statements.

XCYTE THERAPIES, INC.
(a development stage company)
STATEMENTS OF CHANGES IN STOCKHOLDERS' DEFICIT (continued)

	Common stock		Additional paid-in capital	Deferred stock compensation	Accumulated other comprehensive income (loss)	Deficit accumulated during the development stage	Total
	Shares	Amount					
	(in thousands, except share data)						
Balance at December 31, 2001	1,352,207	$ 1	$ 14,488	$ (2,064)	$ —	$ (48,685)	$ (36,260)
Common stock issued May 2002 for technology license, valued at $10.67 per share	63,636	—	679	—	—	—	679
Warrants issued February and March 2002 and beneficial conversion in preferred stock	—	—	12,325	—	—	—	12,325
Deferred stock-based compensation	—	—	3,188	(3,188)	—	—	—
Amortization of deferred compensation, net of reversal of $867 for terminated employees	—	—	(867)	3,372	—	—	2,505
Remeasurement and issuance of stock options in exchange for consulting services	—	—	65	—	—	—	65
Stock options and warrants exercised	108,024	1	10	—	—	—	11
Accretion of redeemable convertible preferred stock	—	—	(8,001)	—	—	—	(8,001)
Change in unrealized gain on investments	—	—	—	—	4	—	4
Net loss	—	—	—	—	—	(19,453)	(19,453)
Comprehensive loss							(19,449)
Balance at December 31, 2002	1,523,867	2	21,887	(1,880)	4	(68,138)	(48,125)
Deferred stock-based compensation	—	—	2,423	(2,423)	—	—	—
Amortization of deferred compensation, net of reversal of $222 for terminated employees	—	—	(222)	1,529	—	—	1,307
Remeasurement and issuance of stock options in exchange for consulting services	—	—	360	—	—	—	360
Stock options and warrants exercised	22,757	—	84	—	—	—	84
Change in unrealized gain on investments	—	—	—	—	(9)	—	(9)
Net loss	—	—	—	—	—	(18,457)	(18,457)
Comprehensive loss							(18,466)
Balance at December 31, 2003	1,546,624	$ 2	$ 24,532	$ (2,774)	$ (5)	$ (86,595)	$ (64,840)

The accompanying notes are an integral part of these financial statements.

XCYTE THERAPIES, INC.
(a development stage company)
STATEMENTS OF CASH FLOWS

	Years ended December 31,			Period from inception (January 5, 1996) to December 31, 2003
	2001	2002	2003	
			(in thousands)	
Cash flows from operating activities				
Net loss	$ (19,512)	$ (19,453)	$ (18,457)	$ (86,595)
Adjustments to reconcile net loss to net cash used in operating activities:				
Non-cash research and development expense for technology licenses	—	679	—	1,716
Amortization of investment premiums, net	—	217	89	306
Non-cash stock compensation expense	2,567	2,570	1,667	7,791
Non-cash interest expense from warrant issuances	44	55	365	503
Non-cash rent expense from warrant issuances	34	34	34	102
Depreciation and amortization	766	823	840	4,691
Loss on sale of property and equipment	75	11	1	195
Changes in assets and liabilities:				
(Increase) decrease in prepaid expenses and other current assets	140	(298)	140	(671)
(Increase) decrease in deposits and other assets	766	63	(825)	(1,281)
Increase (decrease) in accounts payable	(312)	(428)	359	954
Increase in accrued liabilities	333	568	301	1,823
Net cash used in operating activities	(15,099)	(15,159)	(15,486)	(70,466)
Cash flows from investing activities				
Purchases of property and equipment	(888)	(1,144)	(995)	(6,917)
Proceeds from sale of property and equipment	31	—	—	64
Net cash acquired in acquisition	—	—	—	437
Purchases of investments available-for-sale	—	(26,975)	(30,543)	(63,334)
Purchases of investments held-to-maturity	—	—	—	(17,732)
Proceeds from sales and maturities of investments available-for-sale	—	13,146	32,761	64,311
Proceeds from sales and maturities of investments, held-to-maturity	—	—	—	5,145
Net cash provided by (used in) investing activities	(857)	(14,973)	1,223	(18,026)
Cash flows from financing activities				
Net proceeds from issuances of preferred stock	13,111	12,313	—	75,554
Net proceeds from issuances of convertible promissory notes	—	—	12,660	12,660
Common stock repurchased	(2)	—	—	(3)
Proceeds from stock options and warrants exercised	195	11	83	522
Proceeds from equipment financings	706	1,304	913	6,052
Principal payments on equipment financings	(882)	(866)	(880)	(4,052)
Net cash provided by (used in) financing activities	13,128	12,762	12,776	90,733
Net increase (decrease) in cash and cash equivalents	(2,828)	(17,370)	(1,487)	2,241
Cash and cash equivalents at beginning of period	23,926	21,098	3,728	—
Cash and cash equivalents at end of period	$ 21,098	$ 3,728	$ 2,241	$ 2,241
Supplemental cash flow information				
Interest paid	$ 216	$ 212	$ 212	$ 1,341

The accompanying notes are an integral part of these financial statements.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS

1. Organization and significant accounting policies

Organization

Xcyte Therapies, Inc. (the Company), a development stage enterprise, operates in one business segment, developing products based on T cell activation to treat cancer, infectious diseases and other medical conditions associated with compromised immune systems. As a development stage enterprise, substantially all efforts of the Company have been devoted to performing research and experimentation, conducting clinical trials, developing and acquiring intellectual properties, raising capital and recruiting and training personnel.

Liquidity

The Company has experienced losses since its inception, including a net loss for the year ended December 31, 2003. Net losses may continue for at least the next several years as the Company proceeds with the development of its technologies. The size of these losses will depend on the creation of revenue from the commercialization and development of its technologies, if any, and on the level of the Company's expenses. The Company's cash, cash equivalents and short-term investments have decreased from $17.3 million as of December 31, 2002 to $13.5 million as of December 31, 2003. In October 2003, the Company issued convertible notes for net proceeds of approximately $12.7 million. The notes convert to common stock upon the closing of an initial public offering. These convertible notes are due in October 2004, or on or after April 30, 2004 should a majority of the noteholders so elect. If the notes do not convert, the Company will require additional funding to continue its business activities through December 31, 2004. The Company believes that sufficient additional funding will be available to meet its projected operating and capital requirements through December 31, 2004, and the Company is considering various options, including securing additional equity financing and obtaining new collaborators. If the Company raises additional capital by issuing equity or convertible debt securities, existing stockholders may experience substantial dilution. If the Company requires additional financing, there can be no assurance that it will be available on satisfactory terms, or at all. If the Company is unable to secure additional financing on reasonable terms, or is unable to generate sufficient new sources of revenue through arrangements with customers, collaborators and licensees, the Company will be forced to take substantial restructuring actions, which may include significantly reducing the Company's anticipated level of expenditures, the sale of some or all of the Company's assets, or obtaining funds by entering into financing or collaborative agreements on unattractive terms, or the Company will not be able to fund operations.

Cash, cash equivalents and investments

Cash equivalents include highly liquid investments with a maturity on the date of purchase of three months or less. The Company's cash equivalents consist of money market securities. While cash and cash equivalents held by financial institutions may at times exceed federally insured limits, management believes that no material credit or market risk exposure exists due to the high quality of the institutions. The Company has not experienced any losses on such accounts.

All investment securities are classified as available-for-sale and are carried at fair value. Unrealized gains and losses are reported in a separate component of stockholders' deficit. Amortization, accretion, interest and dividends, realized gains and losses and declines in value judged to be other-than-temporary on available-for-sale securities are included in interest income. The cost of securities sold is based on the specific-identification method. Investments in securities with maturities of less than one year or which management intends to use to fund current operations are classified as short-term investments.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

The Company evaluates whether an investment is other-than-temporarily impaired. This evaluation is dependent on the specific facts and circumstances. Factors that are considered in determining whether an other-than-temporary decline in value has occurred include: the market value of the security in relation to its cost basis; the financial condition of the investee; and the intent and ability to retain the investment for a sufficient period of time to allow for recovery in the market value of the investment.

Property and equipment

Property and equipment is stated at cost and is depreciated using the straight-line method over the assets' useful lives, which are six years for equipment and furniture and fixtures and three years for computer equipment. Leasehold improvements are amortized over the lesser of their estimated useful lives or the term of the lease.

Impairment of long-lived assets

In accordance with the provisions of Statement of Financial Accounting Standards No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets* (SFAS 144), the Company reviews long-lived assets, including property and equipment, for impairment whenever events or changes in business circumstances indicate that the carrying amounts of the assets may not be fully recoverable. An impairment loss will be recognized when estimated undiscounted future cash flows expected to result from the use of an asset and its eventual disposition are less than its carrying amount. In that event, a loss is recognized based on the amount by which the carrying value exceeds the fair value of the long-lived asset.

Revenue recognition

To date, the Company has generated no revenues from sales of products. Revenues relate to fees received for licensed technology, cost reimbursement contracts and a Small Business Innovation Research (SBIR) grant awarded to the Company by the National Institutes of Health. Revenue associated with up-front license fees and research and development funding payments are recognized ratably over the relevant periods specified in the agreement, generally the research and development period. Revenue under research and development cost-reimbursement agreements is recognized as the related costs are incurred. Revenue related to grant agreements is recognized as related research and development expenses are incurred.

Other comprehensive income (loss)

Other comprehensive income (loss) includes certain changes in equity that are excluded from net income (loss). The Company's only other comprehensive income (loss) is unrealized gain (loss) on investments.

Research and development expenses

Research and development expenses are charged to expense as incurred and include, but are not limited to, personnel costs, lab supplies, depreciation, amortization and other indirect costs.

Segments

The Company has adopted Statement of Financial Accounting Standards No. 131, *Disclosure about Segments of an Enterprise and Related Information* (SFAS 131), and related disclosures about its products, services, geographic areas and major customers. The Company has determined that it operates in only one segment.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

Stock-based compensation

The Company has adopted the disclosure-only provisions of Statement of Financial Accounting Standards No. 123, *Accounting for Stock-Based Compensation* (SFAS 123), as amended by SFAS No. 148, *Accounting for Stock-Based Compensation—Transition and Disclosure*, and applies Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* (APB 25), and related interpretations in accounting for stock options. Accordingly, employee stock-based compensation expense is recognized based on the intrinsic value of the option at the date of grant.

As required under SFAS No. 123, the pro forma effects of stock-based compensation on net loss are estimated at the date of grant using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. Because the Company's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, the existing models do not, in management's opinion, necessarily provide a reliable single measure of the fair value of the Company's employee stock options.

The fair value of these options was estimated at the date of grant using the Black-Scholes option-pricing model with the following weighted average assumptions for the years ended December 31, 2001, 2002 and 2003: risk-free interest rates of 4.5%, 5.0%, and 5.0%, respectively; a dividend yield of 0% for all periods; expected volatility of 75% to 80% for all periods; and weighted average expected lives of the options of 4 years for all periods. The estimated weighted average fair value of stock options granted during 2001, 2002 and 2003 was $25.28, $12.55, $13.76 per share of common stock, respectively.

For purposes of pro forma disclosures, the estimated fair value of the options is amortized to expense over the vesting period of the related options. The Company's pro forma information follows (in thousands, other than per share information):

	Year ended December 31,		
	2001	2002	2003
Net loss applicable to common stockholders, as reported	$ (27,923)	$ (27,454)	$ (18,457)
Add: Employee stock-based compensation, as reported	1,445	2,505	1,307
Deduct: Stock-based compensation determined under the fair value method	(1,591)	(2,879)	(1,612)
Pro forma net loss	$ (28,069)	$ (27,828)	$ (18,762)
Basic and diluted pro forma net loss per share	$ (22.26)	$ (19.60)	$ (12.61)

Stock options granted to non-employees are recorded using the fair value approach in accordance with SFAS 123 and Emerging Issues Task Force Consensus (EITF) Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services* (EITF 96-18). The options to non-employees are subject to periodic revaluation over their vesting terms.

Deferred stock compensation includes amounts recorded when the exercise price of an option is lower than the fair value of the underlying common stock on the date of grant. Deferred stock-based compensation is amortized over the vesting period of the underlying option using the graded-vesting method.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

Income taxes

The Company accounts for income taxes utilizing the liability method in accordance with Statement of Financial Accounting Standards No. 109, *Accounting for Income Taxes* (SFAS 109). Deferred tax assets or liabilities are recorded for all temporary differences between financial and tax reporting. A valuation allowance is recorded when it is more likely than not that the deferred tax asset will not be recovered.

Net loss per share

Basic net loss per share is computed by dividing net loss applicable to common stockholders by the weighted average number of common shares outstanding for the period. Common stock equivalents, including redeemable convertible preferred stock, stock options and warrants are excluded from the computation of diluted loss per share as their effect is anti-dilutive. For the periods presented, there is no difference between the basic and diluted net loss per share.

Financial instruments

Financial instruments, including cash and cash equivalents and payables, are recorded at cost, which approximates fair value based on the short-term maturities of these instruments. The fair value of investments is determined based on quoted market prices. Refer to Note 2 for further information on the fair value of investments. Based on the borrowing rates currently available to the Company for loans with similar terms, management believes that the carrying value of equipment financing arrangements approximates fair value.

Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Recent accounting pronouncements

In June 2002, the FASB issued SFAS 146, *Accounting for Costs Associated with Exit or Disposal Activities*, which addresses accounting for restructuring, discontinued operations, plant closings or other exit or disposal activity. SFAS 146 requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. SFAS 146 is to be applied prospectively to exit or disposal activities initiated after December 31, 2002. The adoption of SFAS 146 had no initial impact on the Company's financial statements.

In November 2002, the FASB issued FIN 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others, and Interpretation of FASB Statements No. 5, 57 and 107 and Rescission of FASB Interpretation No. 34*. FIN 45 clarifies the requirements of SFAS 5, *Accounting for Contingencies*, relating to the guarantor's accounting for, and disclosure of, the issuance of certain types of guarantees. The disclosure provisions of FIN 45 are effective for financial statements of periods ending after December 15, 2002. However, the provisions for initial recognition and measurement are effective on a prospective basis for guarantees that are issued or modified after December 31, 2002. The adoption of FIN 45 had no initial impact on the Company's financial statements.

In November 2002, the Emerging Issues Task Force reached a consensus on Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables*. EITF Issue No. 00-21 provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

The provisions of EITF Issue No. 00-21 will apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003. The adoption of EITF Issue No. 00-21 had no initial impact on the Company's financial statements.

In January 2003, the FASB issued FIN 46, *Consolidation of Variable Interest Entities*. FIN 46 clarifies the application of Accounting Research Bulletin No. 51, *Consolidated Financial Statements*, to certain entities in which the equity investors do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. FIN 46 applies immediately to variable interest entities created after January 31, 2003 and to variable interest entities in which an enterprise obtains an interest after that date. It applies in the first fiscal year or interim period beginning after December 15, 2003 to variable interest entities in which an enterprise holds a variable interest that it acquired before February 1, 2003. FIN 46 applies to public enterprises as of the beginning of the applicable interim or annual period. The Company does not believe there will be a material effect upon its financial condition or results of operations from the adoption of the provisions of FIN 46.

In May 2003, the FASB issued SFAS 150, *Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity*. SFAS 150 establishes standards for how an issuer classifies and measures certain financial instruments with characteristics of both liabilities and equity. SFAS 150 requires that an issuer classify a financial instrument that is within its scope as a liability by reporting the cumulative effect of a change in accounting principle. The requirements of SFAS 150 are to be applied to the first fiscal period beginning after December 15, 2004. The Company is currently evaluating the impact of adopting SFAS 150 and does not expect there to be a significant impact upon adoption.

Reclassifications

Certain prior year amounts have been reclassified to conform to current year presentation.

2. Investments

A summary of investments follows (in thousands):

	December 31, 2002			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Federal agency obligations	$ 1,532	$ 1	$ —	$ 1,533
Corporate bonds	9,859	5	(2)	9,862
Municipal bonds	2,221	—	—	2,221
Total	$ 13,612	$ 6	$ (2)	$ 13,616

	December 31, 2003			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Federal agency obligations	$ 770	$ —	$ —	$ 770
Corporate bonds	9,680	1	(6)	9,675
Municipal bonds	854	—	—	854
Total	$ 11,304	$ 1	$ (6)	$ 11,299

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

The Company has realized no gains or losses upon the sale of available-for-sale securities during the years ended December 31, 2001, 2002 and 2003 as no investments were sold prior to maturity. The Company has evaluated the nature of the investments, the duration of the impairments (all less than 1 year) and concluded that the impairments are not other-than-temporary. All investments held at December 31, 2002 and December 31, 2003 have contractual maturities within one year.

3. Property and equipment

Property and equipment consists of the following (in thousands):

	December 31,	
	2002	2003
Equipment	$ 2,957	$ 3,794
Furniture and fixtures	197	218
Leasehold improvements	916	989
Computer equipment	888	946
Property and equipment, gross	4,958	5,947
Less accumulated amortization and depreciation	(2,345)	(3,180)
Property and equipment, net	$ 2,613	$ 2,767

Depreciation expense totaled $632,000, $823,000 and $840,000 during the years ended December 31, 2001, 2002 and 2003, respectively.

4. Employee note receivable

During the year ended December 31, 2001, the Company made a $50,000 secured loan to an employee in connection with an individual employment agreement. The loan bears interest at an annual rate of 8.24% and is repayable in equal quarterly installments over four years. The note balance of $36,000 and $24,000 at December 31, 2002 and 2003, respectively, has been classified in deposits and other assets. Interest earned on the note has been immaterial to date.

5. Significant agreements

Technology licenses

In 1998, the Company entered into a license agreement with Genetics Institute, under which the Company was granted a license under Genetics Institute's rights to several patents and patent applications in exchange for the payment of upfront license fees totaling approximately $53,000, for the issuance of 26,522 shares of Series B preferred stock and warrants to purchase 35,363 shares of Series B preferred stock at $6.05 per share. The fees were charged to research and development expenses when paid. The Company, or sublicensee, is required to spend no less than $500,000 annually on research and development activities related to product development until the first commercial sale of a product.

In 1999, the Company entered into a license and supply agreement with Diaclone S.A., in which the Company was granted a license to make, use and sell certain products created with a specific antibody. In consideration for the license, the Company paid and charged to research and development expense a $75,000 nonrefundable fee.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

In addition, the Company entered into a license agreement with the Fred Hutchinson Cancer Research Center in which the Company was granted a license to make, use and sell a specific antibody for certain therapeutic and research purposes. In consideration for the license, the Company paid nonrefundable license fees of $50,000. The Company also agreed to issue 27,272 shares of common stock, valued at $744,000, to the Fred Hutchinson Cancer Research Center. The Company charged research and development expense for all nonrefundable fees paid and the value of the common stock issued.

During the year ended December 31, 2002, the Company entered into a license agreement with the Trustees of the University of Pennsylvania, whereby the Company was granted the right to use certain intellectual property in exchange for payment of nonrefundable license fees of $150,000. The Company also agreed to issue 63,636 shares of common stock, valued at $679,000, to the Trustees of the University of Pennsylvania. The Company charged research and development expense for all nonrefundable fees paid and the value of common stock issued. In October 2003, the Company notified the University of Pennsylvania that it was terminating the license agreement. This termination was effective December 30, 2003, following the 60-day notice period as required pursuant to the terms of the license agreement.

All license agreements require the payment of royalties by the Company based on sales and services. No royalty payments have been required or paid through December 31, 2003.

Manufacturing and supply contracts

The Company entered into a development and supply agreement with Dynal S.A. during the year ended December 31, 1999. The Company has agreed to make nonrefundable payments totaling $3.0 million for certain development activities conducted by Dynal S.A. As of December 31, 2003, the Company had made payments totaling $2.5 million under the agreement, which were charged to research and development expense. The remaining $500,000 payment is payable upon the achievement of specified milestones per the development work plans. As estimated completion dates of the milestone activities are speculative and subject to delivery and acceptance of the product from Dynal to the Company, the Company will expense such payment in the period the products are delivered and accepted. Under the terms of the supply agreement, should the Company not buy a minimum $250,000 of beads in the first 12 months after the development phase ends and $500,000 of beads annually thereafter over the remaining term of the agreement, Dynal shall have the right to terminate the agreement. Either party may terminate the agreement as of August 2009 for any reason, or earlier on account of the material breach or insolvency of the other party. If the agreement is not terminated by August 2009, either party can elect to extend the terms of the agreement for an additional five years. Otherwise, it will automatically renew on a year to year basis.

During the year ended December 31, 2000, the Company entered into development and supply agreements with Lonza Biologics PLC (Lonza). Under the terms of the agreements, the Company is obligated to make payments in British pounds. Exchange rate gains and losses have been insignificant to date. The Company paid approximately $1.7 million, $1.6 million and $1.3 million under the agreements during the years ended December 31, 2001, 2002 and 2003, respectively, all of which were charged to research and development expense. As of December 31, 2003, the Company had no significant remaining contractual obligations to Lonza.

Corporate collaborations

In November 2003, the Company licensed to Fresenius Biotechnology GmbH, a wholly-owned subsidiary of Fresenius AG, the right to use the Company’s Xcellerate Technology on an exclusive basis in the field of HIV

retroviral gene therapy in Europe with a right of first negotiation under some circumstances to expand their rights to North America. The Company is required to transfer its Xcellerate Technology, including methods for manufacturing Xcellerated T cells, to Fresenius and supply all antibody-coated beads ordered by Fresenius. Fresenius is required to reimburse the Company for expenses associated with transferring the technology and to pay the Company for the antibody-coated beads on a cost-plus basis. As of December 31, 2003, the Company had recognized $170,000 as revenue related to the reimbursement of its costs.

In November 2003, the Company licensed its Xcellerate Technology on an exclusive basis in the field of HIV retroviral gene therapy to Fresenius, for development and commercialization in Europe with an option under certain circumstances to expand their rights to North America. The agreement with Fresenius requires the Company to transfer its Xcellerate Technology, including manufacturing capability, to Fresenius and supply all antibody-coated beads required by Fresenius to supports its development and commercialization efforts. Fresenius has agreed to reimburse the Company for its expenses in transferring the technology and to pay the Company for the antibody-coated beads on a cost-plus basis. The terms of the agreement include potential royalties on net sales as well as up to 5.4 million Euros in potential milestone payments to the Company less applicable sublicense fees payable by us to third parties for each product developed. Fresenius' obligation to pay the Company royalties under this agreement terminates on a country by country basis upon the later of the last to expire of the licensed patents for fifteen years after the first commercial sale of a product in the country. The agreement is also subject to earlier termination by Fresenius at any time if Fresenius determines it cannot develop a commercially viable product or complete a required manufacturing audit, by Xcyte if Fresenius does not meet development milestones and by either party for the material breach or insolvency of the other party.

6. Redeemable convertible preferred stock and warrants

Preferred stock

A summary of redeemable convertible preferred stock follows (in thousands, except share data):

	December 31, 2002				December 31, 2003			
	Shares designated	Issued and outstanding shares	Aggregate redemption and liquidation preference	Carrying value	Shares designated	Issued and outstanding shares	Aggregate redemption and liquidation preference	Carrying value
Series A	7,300,080	1,247,354	$ 6,517	$ 6,596	7,300,080	1,255,870	$ 6,562	$ 6,660
Series B	4,097,580	709,647	4,293	4,293	4,097,580	709,647	4,293	4,293
Series C	7,212,316	1,306,470	12,000	11,976	7,212,316	1,306,470	12,000	11,976
Series D	10,300,000	1,838,139	28,105	25,263	10,300,000	1,838,139	28,105	25,263
Series E	6,500,000	863,648	13,205	8,411	6,500,000	863,648	13,205	8,411
Series F	6,500,000	808,040	12,355	8,001	6,500,000	808,040	12,355	8,001
	41,909,976	6,773,298	$ 76,475	$ 64,540	41,909,976	6,781,814	$ 76,520	$ 64,604

From inception through December 31, 1999, the Company issued 1,151,664 shares of Series A preferred stock at $5.23 per share for proceeds of $6.0 million; 683,125 shares of Series B preferred stock at $6.05 per share for proceeds of $4.1 million; and 1,306,470 shares of Series C preferred stock at $9.19 per share for proceeds of $12.0 million. The Company also issued an additional 95,690 shares of Series A preferred stock in conjunction with a business acquisition. The value of the Series A preferred stock of $579,000 was included in the determination of the purchase price of the acquired business. The Company also issued 26,522 shares of Series B

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

preferred stock to acquire technology licenses. These shares were valued at $6.05 per share for an aggregate amount of $160,000. There were no significant costs associated with the Series A, B and C private placements.

During the year ended December 31, 2000, the Company completed a private placement of 1,838,139 shares at $15.29 per share of Series D redeemable preferred stock for $28.0 million, net of offering costs of $117,000. In connection with the offering, holders of the Series D preferred stock received warrants to purchase 205,858 shares of common stock at an exercise price of $1.65 per share. The warrants were valued at $2.7 million using the Black-Scholes option-pricing model. The warrants expire in August 2005 or upon the completion of an initial public offering of the Company's common stock. Of the total net proceeds of $28.0 million, $2.7 million has been recorded in paid-in capital and $25.3 million has been recorded as redeemable convertible preferred stock.

During the year ended December 31, 2001, the Company completed a private placement of 863,648 shares at $15.29 per share of Series E redeemable preferred stock for $13.1 million, net of offering costs of $145,000. In connection with the offering, holders of the Series E preferred stock received warrants to purchase 470,205 shares of common stock at an exercise price of $0.055 per share. The warrants expire in November 2006 or upon completion of an initial public offering. The net proceeds from the Series E preferred stock offering were allocated based on the relative fair values of the warrants, using the Black-Scholes option-pricing model, and the preferred stock. The Company assigned $4.6 million to the value of the warrants and $8.4 million to the value of the preferred stock. After allocating a portion of the proceeds to the common stock warrants, the effective conversion price of the preferred stock was at a discount to the price of the common stock into which the preferred stock is convertible. The discount associated with the beneficial conversion feature is limited to the proceeds allocated to the preferred stock, or $8.4 million. Accordingly, the preferred stock was initially recorded at zero. The Company has recognized the amortization of the discount associated with the beneficial conversion of $8.4 million as a charge to additional paid-in capital (also shown as a deduction to arrive at net loss applicable to common stockholders) and a credit to preferred stock immediately upon issuance since the preferred stock may be converted into common stock at any time, at the holder's option. The remaining discount of $4.6 million will be amortized at the time that redemption by the holders is considered probable or the preferred stock is converted into common stock. Management believes that it is unlikely that the investors would redeem the preferred stock due to the Company's plan for an initial public offering.

During the year ended December 31, 2002, the Company completed a private placement of 808,040 shares at $15.29 per share of Series F redeemable preferred stock for $12.3 million, net of offering costs of $30,000. In connection with the offering, holders of the Series F preferred stock received warrants to purchase 439,932 shares of common stock at an exercise price of $0.055 per share. The warrants expire in February 2007 or upon completion of an initial public offering of the Company's common stock. The net proceeds from the Series F preferred stock offering were allocated based on the relative fair values of the warrants, using the Black-Scholes option-pricing model, and the preferred stock. The Company assigned $4.3 million to the value of the warrants and $8.0 million to the value of the preferred stock. After allocating a portion of the proceeds to the common stock warrants, the effective conversion price of the preferred stock was at a discount to the price of the common stock into which the preferred stock is convertible. The discount associated with the beneficial conversion is limited to the proceeds allocated to the preferred stock, or $8.0 million. The Company has recognized the amortization of the discount associated with the beneficial conversion of $8.0 million as a charge to additional paid-in capital (also shown as a deduction to arrive at net loss applicable to common stockholders) and a credit to preferred stock immediately upon issuance since the preferred stock may be converted into common stock at any time, at the holder's option. The remaining discount of $4.3 million will be amortized at the time that redemption by the holders is considered probable or the preferred stock is converted into common stock. Management believes that it is unlikely that the investors would redeem the preferred stock due to the Company's plan for an initial public offering.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

Holders of Series A, B, C, D, E and F preferred stock have preferential rights to noncumulative dividends at a rate of $0.418, $0.484, $0.7348, $1.2232, $1.2232 and $1.2232 per share, respectively, when and if declared by the Company's board of directors. The holders are entitled to the number of votes equal to the number of shares of common stock into which the preferred stock could be converted. In the event of liquidation, the holders of Series A, B, C, D, E and F preferred stock have preferential rights to liquidation payments of $5.23, $6.05, $9.19, $15.29, $15.29 and $15.29 per share, respectively, plus any accrued but unpaid dividends. After the distributions to the holders of preferred stock have been made, the remaining assets of the Company available for distribution to stockholders will be distributed pro rata among the holders of common stock and preferred stock.

The preferred stock can be converted, at the option of the holder, one-for-one into common stock subject to adjustment for antidilutive events. The conversion price for Series A, B, C, D, E and F preferred stock is $5.23, $6.05, $9.19, $15.29, $15.29 and $15.29, respectively. Each share of the preferred stock will automatically be converted into shares of common stock upon the closing of an initial public offering, provided that the price per share is not less than $22.00 and the aggregate gross proceeds to the Company are not less than $20.0 million.

In addition, the Company has granted registration rights, preferential rights in liquidation and rights of first offer to the preferred stockholders and is precluded from carrying out certain actions without the approval of the majority of the preferred stockholders voting as a group.

As of December 31, 2003, the preferred stock is redeemable at the option of the holder, upon the vote of a majority of the outstanding shares of preferred stock. The Series A, B, C, D, E and F redemption prices are $5.23, $6.05, $9.19, $15.29, $15.29 and $15.29 per share, respectively.

Warrants

From inception through December 31, 1999, warrants were issued to purchase 66,983 shares of Series A preferred stock in connection with a business acquisition at an exercise price of $5.23 per share. The value of the warrants of $330,000 was included in the determination of the purchase price of the business. In addition, warrants to purchase 12,937 shares of Series A preferred stock at $5.23 per share and warrants to purchase 2,238 shares of Series C preferred stock at $9.19 per share were issued in connection with equipment financing. The estimated fair value of the warrants issued of $64,000 and $15,000, respectively, was recorded as an additional financing cost and is being amortized over the term of the loan as interest expense. The warrants to purchase 12,937 shares of Series A preferred stock were exercised in March 2003 through a net exercise, resulting in the issuance of 8,516 shares of Series A preferred stock. In addition, the Company issued warrants to purchase 35,363 shares of Series B preferred stock as partial consideration for a technology license. The warrants were issued at an exercise price of $6.05 per share, and the estimated fair value of the warrants of $131,000 was charged to research and development expense.

During the years ended December 31, 2000 and 2001, the Company issued warrants to purchase 2,612 of Series C preferred stock at an exercise price of $9.19, and 4,316 of Series D preferred stock at an exercise price of $15.29, respectively in connection with equipment financing. The estimated fair value of the warrants issued of $36,000 for Series C and $113,000 for Series D was recorded as additional financing cost and is being amortized over the term of the loan as interest expense using the effective interest method.

During the years ended December 31, 2002 and 2003, the Company issued warrants to purchase 4,316 and 1,143 of Series F stock at an exercise price of $15.29 and $15.29, respectively in connection with equipment financing. The estimated fair value of the warrants issued of $56,000 and $14,000 was recorded as additional financing cost and is being amortized over the term of the loan as interest expense using the effective interest method.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

During the year ended December 31, 2000, the Company issued a warrant for the purchase of 14,545 shares of Series D preferred stock at an exercise price of $15.29 per share, in connection with a lease for a manufacturing facility. The estimated fair value of the warrant of $340,000 was recorded as deferred rent and is being recognized as additional rent expense over the initial term of the lease.

During the year ended December 31, 2001, the Company issued a warrant for the purchase of 1,818 shares of Series E preferred stock at an exercise price of $15.29 per share for services provided in connection with the private placement of Series E redeemable preferred stock. The estimated fair value of the warrants of $48,000 was included in offering costs of the placement.

Warrants expire at various dates from August 2005 to February 2012. 86,727 warrants outstanding at December 31, 2003 will expire upon the closing of an initial public offering. All remaining preferred stock warrants, (46,607 at December 31, 2003) that do not expire upon the closing of a public offering, will convert to common stock warrants upon the closing of an initial public offering. The Company has valued the warrants issued during the years ended December 31, 2001, 2002 and 2003 using the Black-Scholes option-pricing model with the following assumptions: no dividend yields; life of 5 years to 10 years; risk-free interest rates of 4.5% to 5.42%; and volatility of 75% to 80%.

7. Stock option plan

Under the Company's Amended and Restated 1996 Stock Option Plan (1996 Plan), 1,163,636 shares of common stock have been reserved for grants to employees, directors and consultants as of December 31, 2003. In September 2003, the 1996 Plan was amended to increase common stock reserved for grants to 1,163,636 shares and certain outstanding stock options were modified to accelerate vesting for employees with a five-year vesting schedule to a four-year schedule. There was no immediate accounting impact to this change. However, if employees benefit from the change, the appropriate stock compensation charge will be recorded in the period in which there was a benefit to the employee(s) based upon the measurement of the intrinsic value of the related stock options on the date of modification. The term of the 1996 Plan is 10 years unless terminated earlier by the Board of Directors. Options granted under the 1996 Plan may be designated as incentive or nonqualified at the discretion of the 1996 Plan administrator. The vesting period, exercise price and expiration period of options are also established at the discretion of the 1996 Plan administrator. Vesting periods are typically four or five years, and incentive stock options are exercisable at no less than the fair market value at the date of grant, and nonqualified stock options are exercisable at prices determined by the 1996 Plan administrator. In no event shall the term of any incentive stock option exceed 10 years.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

Shares issued upon exercise of options that are unvested are restricted and subject to repurchase by the Company at the original exercise price upon termination of employment, and such restrictions lapse over the original vesting schedule. During the year ended December 31, 2000, the Board of Directors amended the 1996 Plan to allow options granted to certain executives to become exercisable immediately. Three executives elected to early exercise stock options for 93,426 shares of restricted common stock in the year ended December 31, 2000. During the year ended December 31, 2001, the Company repurchased 2,424 shares of restricted stock. The shares were repurchased in an amount equal to the original purchase price of the shares. At December 31, 2003, there were a total of 30,207 shares of restricted common stock outstanding and subject to repurchase. A summary of stock option activity and related information follows:

	Years ended December 31,					
	2001		2002		2003	
	Options	Weighted average exercise price	Options	Weighted average exercise price	Options	Weighted average exercise price
Outstanding at beginning of period	207,088	$ 1.32	341,858	$ 2.92	610,489	$ 4.24
Granted at fair value	—	—	126,853	5.50	—	—
Granted at less than fair value	149,148	5.01	229,641	5.50	225,470	5.45
Canceled	(12,083)	1.65	(86,641)	4.29	(95,587)	5.34
Exercised	(2,295)	0.94	(1,222)	1.98	(22,757)	3.69
Outstanding at end of period	341,858	$ 2.92	610,489	$ 4.24	717,615	$ 4.48

The following summarizes information about stock options outstanding and exercisable at December 31, 2003:

				Exercisable	
Range of exercise price	Number of options	Outstanding weighted average remaining contractual life (years)	Weighted average exercise price	Number of options	Weighted average exercise price
$0.55-$0.61	32,185	3.37	$ 0.57	32,185	$ 0.57
$0.92	79,687	6.01	0.92	79,680	0.92
$1.65-$2.75	65,847	6.85	2.33	56,790	2.35
$5.50	539,896	8.72	5.50	160,176	5.50
	717,615	8.01	$ 4.48	328,831	$ 3.36

The number of options exercisable at December 31, 2001, 2002 and 2003 was 186,615, 227,892 and 328,831, respectively. The weighted average exercise price of options vested and exercisable at December 31, 2001, 2002 and 2003 was $1.65, $2.53 and $3.36, respectively.

During the years ended December 31, 2001, 2002 and 2003, the Company granted options to purchase a total of 71,814, 6,363 and 10,908 shares of common stock, respectively, to consultants and Scientific Advisory Board members for services to be performed through April 2008. In accordance with SFAS 123 and EITF 96-18, options granted to consultants and Scientific Advisory Board members are periodically revalued over the related service periods. The Company recorded stock compensation of $1.1 million, $65,000 and $360,000 during the years ended December 31, 2001, 2002 and 2003, respectively, related to consulting services.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

During the years ended December 31, 2001, 2002 and 2003, in connection with the grant of certain options to employees, the Company recorded deferred stock compensation of $1.7 million, $3.2 million and $2.4 million, respectively, representing the difference between the exercise price and the subsequently determined fair value of the Company's common stock on the date such stock options were granted. The subsequently determined fair value of the Company's common stock was $29.21 during the year ended December 31, 2001, ranged from $5.50 to $21.01 during the year ended December 31, 2002 and ranged from $5.50 to $18.59 during the year ended December 31, 2003. Deferred stock compensation is being amortized on a graded vesting method. During the years ended December 31, 2001, 2002 and 2003, the Company recorded non-cash deferred stock compensation expense related to employees of $1.4 million, $2.5 million and $1.3 million, respectively.

8. Common stock

Common stock reserved for future issuance at December 31, 2003 is as follows:

Description	
1996 Stock Option Plan	
Options granted and outstanding	717,615
Options reserved for future grant	278,691
2003 Stock Plan	636,363
2003 Directors Stock Option Plan	90,909
2003 Employee Stock Purchase Plan	109,090
Series A preferred stock	7,300,080
Series B preferred stock	4,097,580
Series C preferred stock	7,212,316
Series D preferred stock	10,300,000
Series E preferred stock	6,500,000
Series F preferred stock	6,500,000
Preferred stock warrants	133,334
Common stock warrants	907,317
	44,783,295

Milestone pool

Pursuant to a business acquisition prior to January 1, 1999, the Company reserved 287,698 shares of common stock (Milestone Pool) for the Company's possible acquisition of new technology from the scientific founders of the acquired business. During the year ended December 31, 2001, the Milestone Pool was terminated. In exchange for the termination of all rights to the remaining Milestone Pool shares, these scientific founders entered in consulting agreements and were granted options to purchase a total of 68,178 shares of the Company's common stock. The options vest in equal monthly installments over the four-year consulting term and will be periodically revalued and recognized as expense over the related service period. During the years ended December 31, 2001, 2002 and 2003, the Company recorded stock-based compensation of $980,000, $30,000 and $132,000, respectively.

Common stock warrants

The Company has issued warrants to purchase shares of common stock, to private investors in connection with the issuance of preferred stock. During the year ended December 31, 2003, the Company issued warrants to

purchase 13,635 shares of common stock in connection with a consulting arrangement. At December 31, 2003 warrants to purchase 907,317 shares of common stock remain outstanding with a weighted average exercise price of $0.30 per share.

9. Income taxes

At December 31, 2003, the Company had operating loss carryforwards of approximately $74.0 million and research and development tax credit carryforwards of $3.2 million for federal income tax reporting purposes. The net operating losses and tax credits will expire beginning in 2011 if not previously utilized. In certain circumstances, as specified under Section 382 of the Internal Revenue Code of 1986, as amended, due to ownership changes, the Company's ability to utilize its net operating loss carryforwards may be limited.

Deferred income taxes reflect the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The significant components of deferred taxes are as follows (in thousands):

	December 31,	
	2002	2003
Deferred tax assets:		
Net operating loss carryforwards	$ 19,008	$ 25,147
Research and development tax credit	2,972	3,195
License agreements	562	242
Other	230	309
	22,772	28,893
Less valuation allowance	(22,679)	(28,743)
Net deferred tax assets	93	150
Deferred tax liabilities:		
Depreciation	(93)	(150)
Net deferred taxes	$ —	$ —

A valuation allowance has been recorded for deferred tax assets because realization is primarily dependent on generating sufficient taxable income prior to the expiration of net operating loss carryforwards. The valuation allowance for deferred tax assets increased $6.5 million and $6.1 million during the years ended December 31, 2002 and 2003, respectively, principally due to net operating losses recorded during those periods. There have been no offsets or other deductions to the valuation allowance in any period since the Company's inception.

10. Convertible promissory notes

In October 2003, the Company issued Convertible Promissory Notes for $12.7 million. Interest on the unpaid principal amount of the Notes accrues annually at a rate of 6 percent. Principal and any accrued but unpaid interest under these Notes are due and payable upon demand by the holder at any time after October 2004; provided, however, that on or after April 30, 2004, the holders of at least a majority of the aggregate principal amount of the Notes may elect to accelerate the maturity to a date after April 30, 2004. The Notes (including accrued and unpaid interest) are automatically convertible into shares of the Company's common stock, upon the closing of the Company's initial public offering. The Notes are also convertible into shares of a subsequent private round of financing, should the holders of at least a majority of the aggregate principal amount of the Notes so elect.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

In connection with the issuance of the Notes, the holders of the Notes received warrants to purchase additional shares of the Company's preferred stock at $15.29 per share, exercisable after the maturity date of the Notes, through 2008. If an initial public offering occurs prior to the maturity date of the Notes and the closing of the next private financing, then the warrants will expire. If the Company completes its next private round of financing prior to the maturity date of the Notes, the warrants become exercisable at the price per share of that round. The Company allocated $1.4 million of the proceeds to the warrants based on the relative fair values of the Notes and warrants (using the Black-Scholes option pricing model). The resulting $1.4 million discount on the Notes is being amortized to interest expense over the term of the Notes.

Should the Company consummate its initial public offering, and the Notes convert to common stock, the Company will recognize $11.3 million in additional interest expense, which represents the beneficial conversion feature of the Notes. This interest expense would be in addition to recognizing interest expense associated with the unamortized discount existing on the date of conversion.

The number of shares to be issued upon conversion shall be equal to the quotient obtained by dividing (A) the entire principal amount of the Notes plus accrued but unpaid interest as of the closing by (B) $9.625, rounded to the nearest whole share.

11. Long-term obligations and lease obligations

The Company has commitments for noncancelable operating leases for a manufacturing facility, building space and office equipment. The building lease includes rent escalation clauses (3% annually) and has two five-year renewal options. The manufacturing facility lease contains annual rent escalations of 4.5% and an option to renew the lease for two additional five-year periods. In addition to base rent, the Company is required to pay a pro rata share of the operating costs related to the manufacturing facility and building leased space. The Company was required to provide security under the manufacturing lease agreement totaling $435,000 in the form of cash and issued a preferred stock warrant to the lessor.

The Company has financed the acquisition of laboratory and scientific equipment, furniture and fixtures, computer equipment and leasehold improvements through financing arrangements with various third parties. In connection with the financings, the Company has issued preferred stock warrants to the third parties. At December 31, 2003, the Company had two financing arrangements. Under the first arrangement, the Company could borrow up to $1.7 million; however, borrowings under this arrangement were limited to $500,000 until the Company received additional funding acceptable to the lender. At December 31, 2003, the Company had $170,000 available to it under this outstanding arrangement, which expired in January 2004. Under the second arrangement, the Company may borrow up to $2.5 million. At December 31, 2003, the Company has $1.9 million available to it under the outstanding arrangement, which expires in April 2004 unless renewed. Outstanding borrowings under the current and previous financing arrangements were $1.9 million and $1.8 million at years ended December 31, 2002 and 2003, respectively. Outstanding borrowings require monthly principal and interest payments and mature at various dates through 2007. Interest rates applicable to the outstanding borrowings at December 31, 2003 range from 9.18% to 14.11%. The weighted average interest rates for borrowings outstanding during the years ended December 31, 2001, 2002 and 2003 were 12.66%, 11.09% and 10.27%, respectively. Borrowings are secured by the acquired assets that have a net book value of $2.3 million at December 31, 2003. Under all agreements, the Company is required to comply with certain nonfinancial covenants.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

Future minimum payments under operating leases and equipment financing arrangements at December 31, 2003 are as follows (in thousands):

	Equipment financings arrangements	Operating leases
Year ended December 31,		
2004	$ 845	$ 1,571
2005	677	1,580
2006	375	1,430
2007	26	1,085
2008	—	1,120
Thereafter	—	2,260
	1,923	$ 9,046
Less unamortized discount	(85)	
Less current portion	(845)	
Long-term equipment obligations	$ 993	

Rent expense totaled $1.6 million during each of the years ended December 31, 2001, 2002 and 2003.

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

12. Net loss per share

The calculation of basic and diluted loss per share is shown on the table below (in thousands, except share and per share data).

Pro forma loss per share gives effect to the automatic conversion of all outstanding shares of preferred stock into shares of common stock and the automatic conversion of the convertible promissory notes into shares of common stock.

	Year ended December 31,		
	2001	2002	2003
Net loss	$ (19,512)	$ (19,453)	$ (18,457)
Accretion of preferred stock	(8,411)	(8,001)	—
Net loss applicable to common stockholders	$ (27,923)	$ (27,454)	$ (18,457)
Weighted average common shares	1,346,468	1,476,716	1,527,775
Weighted average common shares subject to repurchase	(85,379)	(56,961)	(39,557)
Weighted average number of shares used for basic and diluted per share amounts	1,261,089	1,419,755	1,488,218
Basic and diluted net loss per common share	$ (22.14)	$ (19.34)	$ (12.40)
Pro forma (unaudited):			
Net loss used above			$ (18,457)
Pro forma adjustment to reverse interest expense on convertible note			492
Pro forma net loss			$ (17,965)
Weighted average shares used above			1,488,218
Pro forma adjustments:			
Assumed conversion of redeemable convertible preferred stock			6,780,367
Weighted effect of assumed conversion of promissory note			301,213
Pro forma weighted average shares outstanding			8,569,798
Pro forma basic and diluted net loss per share			$ (2.10)

The Company has excluded all redeemable convertible preferred stock, redeemable convertible preferred stock warrants, convertible promissory notes, common stock warrants and outstanding stock options from the calculation of diluted net loss per common share because all securities are antidilutive for the periods presented. The total number of shares excluded from the calculations of diluted net loss per common share was 7,008,479, 8,422,596 and 9,880,023 for the years ended December 31, 2001, 2002 and 2003, respectively.

13. Other

Initial public offering

In September 2003, the Company's Board of Directors authorized the Company to file a registration statement with the Securities and Exchange Commission for an initial public offering of its common stock (the Offering). On February 11, 2004 the Board of Directors declared a 2 for 11 reverse stock split of the outstanding common

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

and preferred stock and stock options to be effected upon the filing of an Amended and Restated Certificate of Incorporation. In addition, the Amended and Restated Certificate of Incorporation will amend the number of authorized shares of common stock to 100,000,000 and 5,000,000 shares of authorized preferred stock. The accompanying financial statements have been restated to reflect this recapitalization.

If the Company's Offering is consummated, all of the outstanding redeemable convertible preferred stock will be automatically converted into common stock, and all outstanding preferred stock warrants will either expire upon the closing of the Offering or will convert to common stock warrants. In addition, the convertible notes will automatically convert into shares of common stock. Unaudited pro forma stockholders' equity as of December 31, 2003, reflects the effect of the assumed conversion of the preferred stock into 6,781,814 shares of common stock, the convertible notes, plus accrued interest of $177,000 at December 31, 2003, into 1,339,943 shares of common stock and preferred stock warrants into common stock warrants.

If the Offering is consummated, all related costs will be offset against the proceeds in equity. If not consummated, the costs will be charged to expense in the period the Offering is terminated. At December 31, 2003, the Company has deferred $857,000 of costs related to the Offering.

Other stock plans

In connection with the Offering, the Board of Directors authorized, subject to final stockholder approval, the following additional plans.

The 2003 Stock Plan (2003 Plan) provides for the grant of incentive stock options and stock purchase rights to employees (including employee directors) and non-statutory stock options to employees, directors and consultants. A total of 636,363 shares of common stock have been reserved for issuance under the 2003 Plan. The number of shares reserved for issuance under the 2003 Plan will be subject to an automatic annual increase on the first day of each fiscal year beginning in 2005 and ending in 2010 equal to the lesser of 109,090 shares, 4% of the number of outstanding shares of common stock on the last day of the immediately preceding fiscal year or such lesser number of shares as the Board of Directors determines. With respect to options granted under the 2003 Plan, the term of options may not exceed 10 years. In no event may an employee receive awards for more than 1 million shares under the 2003 Plan in any fiscal year.

A total of 90,909 shares of common stock has been reserved for issuance under the 2003 Directors' Stock Option Plan (2003 Directors' Plan). Under the 2003 Directors' Plan, each non-employee director who first becomes a non-employee director after the effective date of the plan will receive an automatic initial grant of an option to purchase 4,545 shares of common stock upon becoming a member of the Board of Directors. On the date of each annual meeting of stockholders, each non-employee director will be granted an option to purchase 1,818 shares of common stock if, on such a date, the director has served on the Board of Directors for at least six months. The 2003 Directors' Plan provides that each option granted to a new director shall vest at the rate of one-third of the total number of shares subject to such option 12 months after the date of grant, with the remaining shares vesting thereafter in equal monthly installments over the next two years so that the option will be fully vested after three years. Each annual option granted to a director vests in full at the end of one year. All options granted under the 2003 Directors' Plan have a term of 10 years and an exercise price equal to the fair market value on the date of the grant.

A total of 109,090 shares of common stock have been reserved for issuance under the 2003 Employee Stock Purchase Plan (2003 Employee Plan). The number of shares reserved for issuance under the 2003 Employee Plan

XCYTE THERAPIES, INC.
(a development stage company)
NOTES TO FINANCIAL STATEMENTS—(Continued)

will be increased on the first day of each of the fiscal years in 2005 to 2010 by the lesser of 54,545 shares, 1% of the number of outstanding shares of common stock on the last day of the immediately preceding fiscal year or such lesser number of shares as the Board of Directors determines. Unless terminated earlier by the Board of Directors, the 2003 Employee Plan will terminate in September 2023.

Table of Contents

4,000,000 Shares
XCYTE THERAPIES, INC.
Common Stock

PROSPECTUS

Until , 2004, all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Piper Jaffray
RBC Capital Markets
Wells Fargo Securities, LLC
JMP Securities

, 2004

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the sale of common stock being registered. All amounts are estimates except the SEC registration fee, the NASD filing fee and The Nasdaq National Market listing fee.

	Amount
SEC registration fee	$ 6,068
NASD filing fee	8,000
Nasdaq National Market listing fee	5,000
Printing and engraving expenses	150,000
Legal fees and expenses	500,000
Accounting fees and expenses	475,000
Blue sky qualification fees and expenses	20,000
Transfer agent and registrar fees	3,500
Miscellaneous fees and expenses	32,432
Total	$ 1,200,000

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation to grant, indemnity to directors and officers in terms sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act of 1933, as amended. Article XIV of our Amended and Restated Certificate of Incorporation (Exhibit 3.2 hereto) and Article VI of our Amended and Restated Bylaws (Exhibit 3.3 hereto), provide for indemnification of our directors and officers, and permits indemnification of our employees and other agents to the maximum extent permitted under the laws of Delaware. Delaware law provides that a corporation may eliminate the personal liability of its directors for monetary damages for breach of their fiduciary duties as directors, except liability for:

- breach of their duty of loyalty to the corporation or its stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which the director derived an improper personal benefit.

In addition, we intend to enter into indemnification agreements (Exhibit 10.1 hereto) with our officers and directors. The underwriting agreement (Exhibit 1.1 hereto) also provides for cross-indemnification among us, and the underwriters with respect to certain matters, including matters arising under the Securities Act. We maintain directors' and officers' liability insurance.

Item 15. Recent Sales of Unregistered Securities

Since September 30, 2000, we have sold and issued the following securities:

1. As of December 31, 2003, we had granted and issued options to purchase 717,617 shares of our common stock with a weighted average price of $4.48 to a number of our employees, directors and consultants pursuant to our 1996 stock incentive compensation plan. Among those receiving options were Ronald J. Berenson, Joanna S. Black, Mark Frohlich, Mark L. Bonyhadi, Kathi L. Cordova, Stewart Craig, Jean Deleage, Peter Langecker and Robert M. Williams.
2. As of December 31, 2003, we had issued an aggregate of 167,330 shares of our common stock to executive officers, directors and employees upon the exercise of stock options granted pursuant to our 1996 stock incentive compensation plan with an aggregate exercise price of $58,622.89. Among those that we have issued shares to were Ronald J. Berenson and Kathi L. Cordova.
3. In December 2000, we granted and issued a warrant with an expiration date of the earlier of either the closing of this offering or December 7, 2005, to purchase 14,545 shares of Series D Preferred Stock at an exercise price of $15.29 to Hibbs/Woodinville Associates, LLC in connection with a lease.
4. In December 2000, we issued 27,272 shares of our common stock to the Fred Hutchinson Cancer Research Center in connection with a license agreement.
5. In July 2001, we granted and issued a warrant with an expiration date of July 17, 2008 to purchase 4,316 shares of Series D Preferred Stock at an exercise price of $15.29 to General Electric Capital Corporation in connection with a loan agreement.
6. In November 2001, we issued 863,648 shares of our Series E Preferred Stock to investors, including but not limited to Alta Partners, ARCH Venture Corporation, MPM Capital, entities affiliated with Sprout Group and W Capital Partners Ironworks, L.P. for an aggregate cash consideration of $13,205,264.
7. In November 2001, we granted and issued warrants with an expiration date of the earlier of either the closing of this offering or November 12, 2006, to purchase an aggregate of 479,205 shares of common stock at an exercise price of $0.055 per share to our Series E investors for an aggregate cash consideration of $2,586, in connection with our Series E financing.
8. In November 2001, we granted and issued a warrant with an expiration date of the earlier of either the closing of this offering or August 8, 2005 to purchase 1,818 shares of Series E Preferred Stock at an exercise price of $15.29 to Chun-Te Liao in connection with consulting services.
9. In February and March 2002, we issued 808,040 shares of our Series F Preferred Stock to investors, including but not limited to Alta Partners, ARCH Venture Corporation, RiverVest, and affiliates of Sprout Group and W Capital Partners Ironworks, L.P. for an aggregate cash consideration of $12,355,018.
10. In February and March 2002, we granted and issued warrants with an expiration date of the earlier of either the closing of this offering or February and March 2012 to purchase an aggregate of 439,932 shares of common stock at an exercise price of $0.055 per share to our Series F investors for an aggregate cash consideration of $2,420, in connection with our Series F financing.
11. In February 2002, we granted and issued a warrant with an expiration date of February 7, 2009 to purchase 4,316 shares of Series F Preferred Stock at an exercise price of $15.29 to General Electric Capital Corporation in connection with a loan agreement.
12. In May 2002, we issued 63,636 shares of our common stock to the Trustees of the University of Pennsylvania in connection with a license agreement.
13. In April 2003, we granted and issued a warrant with an expiration date of April 1, 2008 to purchase 6,363 shares of common stock at an exercise price of $5.50 to Inkeun Lee in connection with consulting services.

14. In April 2003, we granted and issued a warrant with an expiration date of April 1, 2008 to purchase 7,272 shares of common stock at an exercise price of $5.50 to Inkeun Lee in connection with consulting services.
15. In July 2003, we granted and issued a warrant with an expiration date of the earlier of July 17, 2010 or the closing of this offering to purchase 84 shares of Series F Preferred Stock at an exercise price of $15.29 to Oxford Finance Corporation in connection with equipment loan.
16. In September 2003, we granted and issued a warrant with an expiration date of the earlier of September 5, 2010 or the closing of this offering to purchase 140 shares of Series F Preferred Stock at an exercise price of $15.29 to Oxford Finance Corporation in connection with an equipment loan.
17. In October 2003, we sold convertible promissory notes in an aggregate amount of approximately $12.7 million to investors, including but not limited to Alta Partners, ARCH Venture Partners, MPM Capital, Sprout Group, Vector Fund, Vulcan Ventures and W Capital Partners Ironworks L.P. These convertible promissory notes will convert into 1,339,943 shares of our common stock (as of December 31, 2003) upon completion of this offering.
18. In October 2003, in connection with the sale of convertible promissory notes, we issued warrants to purchase shares of either preferred stock issued in our next equity financing at the then applicable price per share, or, if we have not had a next equity financing on or before the maturity date of the convertible promissory notes, our Series F Preferred Stock at an exercise price of $15.29 per share. The warrants are not exercisable on or prior to completion of this offering and terminate upon completion of this offering.
19. In November 2003, we granted and issued a warrant with an expiration date of the earlier of November 7, 2010 or the closing of this offering to purchase 154 shares of Series F Preferred Stock at an exercise price of $15.29 to Oxford Finance Corporation in connection with an equipment loan.
20. In December 2003, we granted and issued a warrant with an expiration date of the earlier of December 19, 2010 or the closing of this offering to purchase 765 shares of Series F Preferred Stock at an exercise price of $15.29 to Oxford Finance Corporation in connection with an equipment loan.

The issuances described in Items 1 and 2 were deemed exempt from registration under the Securities Act in reliance upon Rule 701 promulgated under the Securities Act promulgated under Section 3(b) thereof on the basis that the transactions were pursuant to a compensation benefit plan and contracts relating to employment or pursuant to the Section 4(2), thereof on the basis that the transactions did not involve a public offering. In addition, the issuances of the above securities described in Items 3 through 18 were deemed to be exempt from registration under the Securities Act in reliance on Section 4(2) thereof on the basis that each transaction did not involve a public offering. The recipients of securities in each such transaction represented to us their intentions to acquire the securities for investment purposes only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the share certificates and warrants issued in such transactions. All recipients had adequate access, through their relationships with us and otherwise, to information about us.

Table of Contents

Item 16. Exhibits

Exhibit number	Description
1.1	Form of Underwriting Agreement.
3.1*	Amended and Restated Certificate of Incorporation of Xcyte Therapies, Inc.
3.2*	Form of Amended and Restated Certificate of Incorporation of Xcyte Therapies, Inc. to be filed and effective upon completion of this offering.
3.3*	Amended and Restated Bylaws of Xcyte Therapies, Inc. to be effective upon completion of this offering.
4.1	Form of Xcyte Therapies, Inc. Stock Certificate.
5.1	Opinion of Heller Ehrman White & McAuliffe LLP.
10.1*	Form of Indemnification Agreement between Xcyte Therapies and each of its officers and directors.
10.2*	Series E Preferred Stock and Warrant Purchase Agreement dated November 13, 2001.
10.3*	Series F Preferred Stock and Warrant Purchase Agreement dated February 5, 2002.
10.4*	Convertible Note and Warrant Purchase Agreement dated October 9, 2003.
10.5*	Form of Convertible Promissory Note issued in connection with Convertible Note and Warrant Purchase Agreement dated as of October 9, 2003.
10.6*	Amended and Restated Investor Rights Agreement dated February 5, 2002.
10.7*	Amendment to Amended and Restated Investor Rights Agreement dated May 22, 2002.
10.8*	Waiver of Preemptive Rights and Amendment to Amended and Restated Investor Rights Agreement dated as of October 9, 2003.
10.9*	Form of Warrant to purchase Common Stock issued by Xcyte Therapies, Inc.
10.10*	Warrant to purchase Series D Preferred Stock dated December 7, 2000 issued by Xcyte Therapies, Inc. in favor of Hibbs/Woodinville Associates, LLC.
10.11*	Form of Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of General Electric Capital Corporation.
10.12*	Series E Preferred Stock Purchase Warrant issued by Xcyte Therapies in favor of Chun-Te Liao dated November 30, 2001.
10.13*	Warrant to purchase Common Stock issued by Xcyte Therapies, Inc. in favor of Inkeun Lee dated April 1, 2003.
10.14*	Warrant to purchase Common Stock issued by Xcyte Therapies, Inc. in favor of Inkeun Lee dated April 1, 2003.
10.15*	Master Security Agreement between Xcyte Therapies, Inc. and Oxford Finance Corporation dated July 1, 2003.
10.16*	Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated July 17, 2003.
10.17*	Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated September 5, 2003.
10.18	Warrant to purchase Series F Preferred Stock by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated November 7, 2003.
10.19	Warrant to purchase Series F Preferred Stock by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated December 19, 2003.
10.20*	Form of Stock Purchase Warrant issued in connection with Convertible Note and Warrant Purchase Agreement dated as of October 9, 2003.

Exhibit number	Description
10.21*	Senior Loan and Security Agreement dated July 1, 1999 between Xcyte Therapies, Inc. and Phoenix Leasing Incorporated.
10.22*	Master Security Agreement dated January 15, 2000 between Xcyte Therapies, Inc. and General Electric Capital Corporation.
10.23*	Facility Lease dated June 21, 1999 between Xcyte Therapies, Inc. and Alexandria Real Estate Equities, Inc.
10.24*	First Amendment to Lease dated October 23, 2001 to Lease dated June 21, 1999 between Xcyte Therapies, Inc. and Alexandria Real Estate Equities, Inc.
10.25*	Second Amendment to Lease dated March 26, 2003 between Xcyte Therapies, Inc. and Alexandria Real Estate Equities, Inc.
10.26	Third Amendment to Lease dated November 12, 2003 between Xcyte Therapies, Inc. Alexandria Real Estate Equities, Inc.
10.27*	Facility Lease dated December 7, 2000 between Xcyte Therapies, Inc. and Hibbs/ Woodinville Associates, LLC.
10.28*	Amended and Restated 1996 Stock Option Plan.
10.29*	2003 Stock Plan.
10.30*	2003 Employee Stock Purchase Plan.
10.31*	2003 Directors' Stock Option Plan.
10.32†	License and Supply Agreement dated October 15, 1999 between Xcyte Therapies, Inc. and Diaclone S.A.
10.33	First Amendment to License and Supply Agreement dated August 15, 2000 between Xcyte Therapies, Inc. and Diaclone S.A.
10.34†	Development and Supply Agreement dated August 1, 1999 between Xcyte Therapies, Inc. and Dynal S.A.
10.35†	License Agreement dated July 8, 1998 between Xcyte Therapies, Inc., and Genetics Institute, Inc.
10.36	First Amendment to License Agreement dated April 10, 2003 between Xcyte Therapies, Inc. and Genetics Institute, Inc.
10.37†	Non-Exclusive License Agreement dated October 20, 1999 between Xcyte Therapies, Inc. and the Fred Hutchinson Cancer Research Center, as amended.
10.38†	Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.39†*	Amendment No. 1 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.40†*	Amendment No. 2 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.41†*	Amendment No. 3 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.42†*	Amendment No. 4 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.43†*	Amendment No. 5 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.44†	Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.

Exhibit number	Description
10.45†*	Amendment No. 2 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.46†*	Amendment No. 3 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.47†	Collaboration Agreement dated November 14, 2003 between Xcyte Therapies, Inc. and Fresenius Biotech GmbH.
10.48*	Employment Agreement between Xcyte Therapies, Inc. and Mark Frohlich, M.D. dated as of August 27, 2001.
10.49*	Employment Agreement between Xcyte Therapies, Inc. and Joanna S. Black, J.D. dated as of December 31, 2001.
10.50	Employment Agreement between Xcyte Therapies, Inc. and Robert L. Kirkman, M.D. dated as of January 15, 2004.
23.1	Consent of Ernst & Young LLP, Independent Auditors.
23.2	Consent of Heller Ehrman White & McAuliffe LLP (included in Exhibit 5.1).
24.1*	Power of Attorney (see page II-7).

* Filed Previously
** To be filed by amendment.
† Certain information in these exhibits has been omitted and filed separately with the Securities and Exchange Commission pursuant to a confidential treatment request under 17 C.F.R. Sections 200.80(b)(4), 200.83 and 230.406.

Item 17. Undertakings

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) for purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and

(2) for the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Table of Contents

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment No. 2 to Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Seattle, State of Washington on February 17, 2004.

XCYTE THERAPIES, INC.

By: *

Ronald J. Berenson, M.D.
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

Signature	Title	Date
*	President, Chief Executive Officer and Director (Principal Executive Officer)	February 17, 2004
Ronald J. Berenson, M.D.		
*	Senior Vice President of Finance and Treasurer (Principal Financial and Accounting Officer)	February 17, 2004
Kathi L. Cordova		
*	Director	February 17, 2004
Robert E. Curry, Ph.D.		
*	Director	February 17, 2004
Jean Deleage, Ph.D.		
*	Director	February 17, 2004
Dennis Henner, Ph.D.		
*	Director	February 17, 2004
Peter Langecker, M.D., Ph.D.		
*	Director	February 17, 2004
Robert T. Nelsen		
*	Director	February 17, 2004
Robert M. Williams, Ph.D.		
*	Director	February 17, 2004
Stephen N. Wertheimer		
*By: /s/ JOANNA S. BLACK		February 17, 2004
Joanna S. Black, Attorney-in-fact		

Table of Contents

EXHIBIT INDEX

Exhibit number	Description
1.1	Form of Underwriting Agreement.
3.1*	Amended and Restated Certificate of Incorporation of Xcyte Therapies, Inc.
3.2*	Form of Amended and Restated Certificate of Incorporation of Xcyte Therapies, Inc. to be filed and effective upon completion of this offering.
3.3*	Amended and Restated Bylaws of Xcyte Therapies, Inc. to be effective upon completion of this offering.
4.1	Form of Xcyte Therapies, Inc. Stock Certificate.
5.1	Opinion of Heller Ehrman White & McAuliffe LLP.
10.1*	Form of Indemnification Agreement between Xcyte Therapies and each of its officers and directors.
10.2*	Series E Preferred Stock and Warrant Purchase Agreement dated November 13, 2001.
10.3*	Series F Preferred Stock and Warrant Purchase Agreement dated February 5, 2002.
10.4*	Convertible Note and Warrant Purchase Agreement dated October 9, 2003.
10.5*	Form of Convertible Promissory Note issued in connection with Convertible Note and Warrant Purchase Agreement dated as of October 9, 2003.
10.6*	Amended and Restated Investor Rights Agreement dated February 5, 2002.
10.7*	Amendment to Amended and Restated Investor Rights Agreement dated May 22, 2002.
10.8*	Waiver of Preemptive Rights and Amendment to Amended and Restated Investor Rights Agreement dated as of October 9, 2003.
10.9*	Form of Warrant to purchase Common Stock issued by Xcyte Therapies, Inc.
10.10*	Warrant to purchase Series D Preferred Stock dated December 7, 2000 issued by Xcyte Therapies, Inc. in favor of Hibbs/Woodinville Associates, LLC.
10.11*	Form of Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of General Electric Capital Corporation.
10.12*	Series E Preferred Stock Purchase Warrant issued by Xcyte Therapies in favor of Chun-Te Liao dated November 30, 2001.
10.13*	Warrant to purchase Common Stock issued by Xcyte Therapies, Inc. in favor of Inkeun Lee dated April 1, 2003.
10.14*	Warrant to purchase Common Stock issued by Xcyte Therapies, Inc. in favor of Inkeun Lee dated April 1, 2003.
10.15*	Master Security Agreement between Xcyte Therapies, Inc. and Oxford Finance Corporation dated July 1, 2003.
10.16*	Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated July 17, 2003.
10.17*	Warrant to purchase Series F Preferred Stock issued by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated September 5, 2003.
10.18	Warrant to purchase Series F Preferred Stock by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated November 7, 2003.
10.19	Warrant to purchase Series F Preferred Stock by Xcyte Therapies, Inc. in favor of Oxford Finance Corporation dated December 19, 2003.
10.20*	Form of Stock Purchase Warrant issued in connection with Convertible Note and Warrant Purchase Agreement dated as of October 9, 2003.

Table of Contents

Exhibit number	Description
10.21*	Senior Loan and Security Agreement dated July 1, 1999 between Xcyte Therapies, Inc. and Phoenix Leasing Incorporated.
10.22*	Master Security Agreement dated January 15, 2000 between Xcyte Therapies, Inc. and General Electric Capital Corporation.
10.23*	Facility Lease dated June 21, 1999 between Xcyte Therapies, Inc. and Alexandria Real Estate Equities, Inc.
10.24*	First Amendment to Lease dated October 23, 2001 to Lease dated June 21, 1999 between Xcyte Therapies, Inc. and Alexandria Real Estate Equities, Inc.
10.25*	Second Amendment to Lease dated March 26, 2003 between Xcyte Therapies, Inc. and Alexandria Real Estate Equities, Inc.
10.26	Third Amendment to Lease dated November 12, 2003 between Xcyte Therapies, Inc. and Alexandria Real Estate Equities, Inc.
10.27*	Facility Lease dated December 7, 2000 between Xcyte Therapies, Inc. and Hibbs/ Woodinville Associates, LLC.
10.28*	Amended and Restated 1996 Stock Option Plan.
10.29*	2003 Stock Plan.
10.30*	2003 Employee Stock Purchase Plan.
10.31*	2003 Directors' Stock Option Plan.
10.32†	License and Supply Agreement dated October 15, 1999 between Xcyte Therapies, Inc. and Diaclone S.A., as amended.
10.33	First Amendment to License and Supply Agreement dated August 15, 2000 between Xcyte Therapies, Inc. and Diaclone S.A.
10.34†	Development and Supply Agreement dated August 1, 1999 between Xcyte Therapies, Inc. and Dynal S.A.
10.35†	License Agreement dated July 8, 1998 between Xcyte Therapies, Inc., and Genetics Institute, Inc.
10.36	First Amendment to License Agreement dated April 10, 2003 between Xcyte Therapies, Inc. and Genetics Institute, Inc.
10.37†	Non-Exclusive License Agreement dated October 20, 1999 between Xcyte Therapies, Inc. and the Fred Hutchinson Cancer Research Center, as amended.
10.38†	Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.39†*	Amendment No. 1 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.40†*	Amendment No. 2 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.41†*	Amendment No. 3 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.42†*	Amendment No. 4 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.43†*	Amendment No. 5 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.44†	Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.45†*	Amendment No. 2 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.

Exhibit number	Description
10.46†*	Amendment No. 3 to the Services Agreement dated June 6, 2000 between Xcyte Therapies, Inc. and Lonza Biologics PLC.
10.47†	Collaboration Agreement dated November 14, 2003 between Xcyte Therapies, Inc. and Fresenius Biotech GmbH.
10.48*	Employment Agreement between Xcyte Therapies, Inc. and Mark Frohlich, M.D. dated as of August 27, 2001.
10.49*	Employment Agreement between Xcyte Therapies, Inc. and Joanna S. Black, J.D. dated as of December 31, 2001.
10.50	Employment Agreement between Xcyte Therapies, Inc. and Robert L. Kirkman, M.D. dated as of January 15, 2004.
23.1	Consent of Ernst & Young LLP, Independent Auditors.
23.2	Consent of Heller Ehrman White & McAuliffe LLP (included in Exhibit 5.1).
24.1*	Power of Attorney (see page II-7).

* Filed Previously.
** To be filed by amendment.
† Certain information in these exhibits has been omitted and filed separately with the Securities and Exchange Commission pursuant to a confidential treatment request under 17 C.F.R. Sections 200.80(b)(4), 200.83 and 230.406.

Exhibit 1.1

XCYTE THERAPIES, INC.

____ Shares

Common Stock
($0.001 par value per Share)

UNDERWRITING AGREEMENT

[trade date]

UNDERWRITING AGREEMENT

[trade date]

Piper Jaffray & Co.
RBC Capital Markets Corporation
Wells Fargo Securities, LLC
JMP Securities LLC
as Managing Underwriters
c/o Piper Jaffray & Co.
800 Nicollet Mall
Suite 800
Minneapolis, MN 55402

Ladies and Gentlemen:

Xcyte Therapies, Inc., a Delaware corporation (the "Company"), proposes to issue and sell to the underwriters named in Schedule A annexed hereto (the "Underwriters"), for whom you are acting as representatives, an aggregate of [# of firm shares] shares (the "Firm Shares") of Common Stock, $0.001 par value per share (the "Common Stock"), of the Company. In addition, solely for the purpose of covering over-allotments, the Company proposes to grant to the Underwriters the option to purchase from the Company up to an additional [# of additional shares] shares of Common Stock (the "Additional Shares"). The Firm Shares and the Additional Shares are hereinafter collectively sometimes referred to as the "Shares." The Shares are described in the Prospectus which is referred to below.

The Company hereby acknowledges that, in connection with the proposed offering of the Shares, it has requested Piper Jaffray & Co. ("Piper Jaffray") to administer a directed share program (the "Directed Share Program") under which up to [# of reserved shares] Firm Shares, or [__]% of the Firm Shares to be purchased by the Underwriters (the "Reserved Shares"), shall be reserved for sale by Piper Jaffray at the initial public offering price to the Company's officers, directors, employees and consultants and other persons having a relationship with the Company as designated by the Company (the "Directed Share Participants") as part of the distribution of the Shares by the Underwriters, subject to the terms of this Agreement, the applicable rules, regulations and interpretations of the National Association of Securities Dealers, Inc. ("NASD") and all other applicable laws, rules and regulations. The number of Shares available for sale to the general public will be reduced to the extent that Directed Share Participants purchase Reserved Shares. The Underwriters may offer any Reserved Shares not purchased by Directed Share Participants to the general public on the same basis as the other Shares being issued and sold hereunder. Without limiting the generality of the foregoing, any Reserved Shares not confirmed in writing for purchase by any Directed Share Participants by the end of the business day immediately following the date hereof shall be deemed not to be purchased by Directed Share Participants and may be offered by the Underwriters to the general public on the same basis as the other Shares being issued and sold hereunder. The Company has supplied Piper Jaffray with the names, addresses and telephone numbers of the individuals or other entities which the Company has designated to be participants in the Directed Share Program. It is understood that any number of those so designated to participate in the Directed Share Program may decline to do so.

The Company has filed, in accordance with the provisions of the Securities Act of 1933, as amended, and the rules and regulations thereunder (collectively, the "Act"), with the Securities and Exchange Commission (the "Commission") a registration statement on Form S-1 (File No. [_____]), including a prospectus, relating to the Shares. The Company has furnished to you, for use by the Underwriters and by dealers, copies of one or more preliminary prospectuses (each such preliminary prospectus being herein called a "Preliminary Prospectus") relating to the Shares. Except where the context otherwise requires, the registration statement, as amended when it became or becomes effective, including all documents filed as a part thereof, and including any information contained in a prospectus subsequently filed with the Commission pursuant to Rule 424(b) under the Act and deemed to be part of the registration statement at the time of effectiveness pursuant to Rule 430A under the Act and also including any registration statement filed pursuant to Rule 462(b) under the Act, is herein called the "Registration Statement," and the prospectus in the form filed by the Company with the Commission pursuant to Rule 424(b) under the Act on or before the second business day after the date hereof (or such earlier time as may be required under the Act), or, if no such filing is required, the form of final prospectus included in the Registration Statement at the time it became effective, is herein called the "Prospectus." As used herein, "business day" shall mean a day on which the New York Stock Exchange is open for trading.

The Company and the Underwriters agree as follows:

1. Sale and Purchase. Upon the basis of the representations and warranties and subject to the terms and conditions herein set forth, the Company agrees to issue and sell to the respective Underwriters and each of the Underwriters, severally and not jointly, agrees to purchase from the Company the number of Firm Shares set forth opposite the name of such Underwriter in Schedule A attached hereto, subject to adjustment in accordance with Section 8 hereof, in each case at a purchase price of $[__] per Share. The Company is advised by you that the Underwriters intend (i) to make a public offering of their respective portions of the Firm Shares as soon after the effective date of the Registration Statement as in your judgment is advisable and (ii) initially to offer the Firm Shares upon the terms set forth in the Prospectus. You may from time to time increase or decrease the public offering price after the initial public offering to such extent as you may determine.

In addition, the Company hereby grants to the several Underwriters the option to purchase, and upon the basis of the representations and warranties and subject to the terms and conditions herein set forth, the Underwriters shall have the right to purchase, severally and not jointly, from the Company, ratably in accordance with the number of Firm Shares to be purchased by each of them, all or a portion of the Additional Shares as may be necessary to cover over-allotments made in connection with the offering of the Firm Shares, at the same purchase price per share to be paid by the Underwriters to the Company for the Firm Shares. This option may be exercised by Piper Jaffray on behalf of the several Underwriters at any time and from time to time on or before the thirtieth day following the date of the Prospectus, by written notice to the Company. Such notice shall set forth the aggregate number of Additional Shares as to which the option is being exercised and the date and time when the Additional Shares are to be delivered (such date and time being herein referred to as

the "additional time of purchase"); provided, however, that the additional time of purchase shall not be earlier than the time of purchase (as defined below) nor earlier than the second business day after the date on which the option shall have been exercised nor later than the tenth business day after the date on which the option shall have been exercised. The number of Additional Shares to be sold to each Underwriter shall be the number which bears the same proportion to the aggregate number of Additional Shares being purchased as the number of Firm Shares set forth opposite the name of such Underwriter on Schedule A hereto bears to the total number of Firm Shares (subject, in each case, to such adjustment as you may determine to eliminate fractional shares), subject to adjustment in accordance with Section 8 hereof.

2. Payment and Delivery. Payment of the purchase price for the Firm Shares shall be made to the Company by Federal Funds wire transfer against delivery of the certificates for the Firm Shares to you through the facilities of The Depository Trust Company ("DTC") for the respective accounts of the Underwriters. Such payment and delivery shall be made at 10:00 A.M., New York City time, on [closing date] (unless another time shall be agreed to by you and the Company or unless postponed in accordance with the provisions of Section 8 hereof). The time at which such payment and delivery are to be made is hereinafter sometimes called "the time of purchase." Electronic transfer of the Firm Shares shall be made to you at the time of purchase in such names and in such denominations as you shall specify.

Payment of the purchase price for the Additional Shares shall be made at the additional time of purchase in the same manner and at the same office as the payment for the Firm Shares. Electronic transfer of the Additional Shares shall be made to you at the additional time of purchase in such names and in such denominations as you shall specify.

Deliveries of the documents described in Section 6 hereof with respect to the purchase of the Shares shall be made at the offices of Cooley Godward LLP at 3175 Hanover Street, Palo Alto, California 94304, at 9:00 A.M., New York City time, on the date of the closing of the purchase of the Firm Shares or the Additional Shares, as the case may be.

3. Representations and Warranties of the Company. The Company represents and warrants to and agrees with each of the Underwriters that:

(a) the Registration Statement has been declared effective under the Act; no stop order of the Commission preventing or suspending the use of any Preliminary Prospectus or the effectiveness of the Registration Statement has been issued and no proceedings for such purpose have been instituted or, to the Company's knowledge after due inquiry, are contemplated by the Commission; each Preliminary Prospectus, at the time of filing thereof, complied with the requirements of the Act, and the last Preliminary Prospectus distributed in connection with the offering of the Shares did not, as of its date, and does not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; the Registration Statement complied when it became effective, complies and, at the time of purchase and any additional time of purchase and any time at which any sales with respect to which the Prospectus is delivered, will comply with the requirements of the Act, and the Prospectus

will comply, as of its date and at the time of purchase and any additional times of purchase and any time at which any sales with respect to which the Prospectus is delivered, with the requirements of the Act; any statutes, regulations, contracts or other documents that are required to be described in the Registration Statement or the Prospectus or to be filed as exhibits to the Registration Statement have been and will be so described or filed; the conditions to the use of Form S-1 have been satisfied; the Registration Statement did not when it became effective, does not and, at the time of purchase and any additional time of purchase and any time at which any sales with respect to which the Prospectus is delivered, will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and the Prospectus will not, as of its date and at the time of purchase and any additional time of purchase and any time at which any sales with respect to which the Prospectus is delivered, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; provided, however, that the Company makes no warranty or representation with respect to any statement contained in the last Preliminary Prospectus, the Registration Statement or the Prospectus in reliance upon and in conformity with information concerning an Underwriter and furnished in writing by or on behalf of such Underwriter through you to the Company expressly for use in the last Preliminary Prospectus, the Registration Statement or the Prospectus; and the Company has not distributed and will not distribute any "prospectus" (within the meaning of the Act) or offering material in connection with the offering or sale of the Shares other than the Registration Statement, the then most recent Preliminary Prospectus and the Prospectus;

(b) as of the date of this Agreement, the Company has an authorized and outstanding capitalization as set forth in the section of the Registration Statement and the Prospectus entitled "Capitalization" and "Description of capital stock," and, as of the time of purchase and the additional time of purchase, as the case may be, the Company shall have an authorized and outstanding capitalization as set forth in the section of the Registration Statement and the Prospectus entitled "Capitalization" and "Description of capital stock" (subject, in each case, to the issuance of shares of Common Stock upon exercise of stock options and warrants disclosed as outstanding in the Registration Statement and the Prospectus and the grant of options under existing stock option plans described in the Registration Statement and the Prospectus); all of the issued and outstanding shares of capital stock, including the Common Stock, of the Company have been duly authorized and validly issued and are fully paid and non-assessable, have been issued in compliance with all federal and state securities laws and were not issued in violation of any preemptive right, resale right, right of first refusal or similar right; prior to the time of purchase, all outstanding shares of the Company's [legal description of p/s], $[__] par value per share, and $[aggregate principal amount] of [legal description of notes], shall convert into the number of shares of Common Stock, and shall convert in the manner, set forth in the Registration Statement and the Prospectus; and, prior to the date hereof, the Company has duly effected and completed a [x] for [x] reverse stock split of the Common Stock in the manner set forth in the Registration Statement and the Prospectus;

(c) the Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware, with full corporate power and authority to own, lease and operate its properties and conduct its business as described in the Registration Statement and the Prospectus, to execute and deliver this Agreement and to issue, sell and deliver the Shares as contemplated herein;

(d) the Company is duly qualified to do business as a foreign corporation and is in good standing in each jurisdiction where the ownership or leasing of its properties or the conduct of its business requires such qualification, except where the failure to be so qualified and in good standing would not, individually or in the aggregate, have a material adverse effect on the business, properties, financial condition, results of operation or prospects of the Company and the Subsidiaries (as hereinafter defined) taken as a whole (a "Material Adverse Effect");

(e) the Company has no subsidiaries (as defined under the Act) other than [_____] (collectively, the "Subsidiaries"); the Company owns all of the issued and outstanding capital stock of each of the Subsidiaries; other than the capital stock of the Subsidiaries, the Company does not own, directly or indirectly, any shares of stock or any other equity or long-term debt securities of any corporation or have any equity interest in any firm, partnership, joint venture, association or other entity; complete and correct copies of the certificates of incorporation and the bylaws of the Company and the Subsidiaries and all amendments thereto have been delivered to you, and, except as set forth in the exhibits to the Registration Statement, no changes therein will be made on or after the date hereof or on or before the time of purchase or, if later, the additional time of purchase; each Subsidiary has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation, with full corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement and the Prospectus; each Subsidiary is duly qualified to do business as a foreign corporation and is in good standing in each jurisdiction where the ownership or leasing of its properties or the conduct of its business requires such qualification, except where the failure to be so qualified and in good standing would not, individually or in the aggregate, have a Material Adverse Effect; all of the outstanding shares of capital stock of each of the Subsidiaries have been duly authorized and validly issued, are fully paid and non-assessable and are owned by the Company subject to no security interest, other encumbrance or adverse claims; no options, warrants or other rights to purchase, agreements or other obligations to issue or other rights to convert any obligation into shares of capital stock or ownership interests in the Subsidiaries are outstanding; and the Company has no "significant subsidiary," as that term is defined in Rule 1-02(w) of Regulation S-X under the Act, and no group consisting of any or all of the Subsidiaries would, in the aggregate, constitute a "significant subsidiary" of the Company;

(f) the Shares have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued, fully paid and non-assessable and free of statutory and contractual preemptive rights,

resale rights, rights of first refusal and similar rights;

(g) the capital stock of the Company, including the Shares, conforms to the description thereof contained in the Registration Statement and the Prospectus, and the certificates for the Shares are in due and proper form and the holders of the Shares will not be subject to personal liability by reason of being such holders;

(h) this Agreement has been duly authorized, executed and delivered by the Company;

(i) neither the Company nor any of the Subsidiaries is in breach or violation of or in default under (nor has any event occurred which with notice, lapse of time or both would result in any breach or violation of, constitute a default under or give the holder of any indebtedness (or a person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a part of such indebtedness under) its respective charter or bylaws, or any indenture, mortgage, deed of trust, bank loan or credit agreement or other evidence of indebtedness, or any license, lease, contract or other agreement or instrument to which the Company or any of the Subsidiaries is a party or by which any of them or any of their properties may be bound or affected, and the execution, delivery and performance of this Agreement, the issuance and sale of the Shares and the consummation of the transactions contemplated hereby will not conflict with, result in any breach or violation of or constitute a default under (nor constitute any event which with notice, lapse of time or both would result in any breach or violation of or constitute a default under) the charter or bylaws of the Company or any of the Subsidiaries, or any indenture, mortgage, deed of trust, bank loan or credit agreement or other evidence of indebtedness, or any license, lease, contract or other agreement or instrument to which the Company or any of the Subsidiaries is a party or by which any of them or any of their respective properties may be bound or affected, or any federal, state, local or foreign law, regulation or rule or any decree, judgment or order applicable to the Company or any of the Subsidiaries;

(j) no approval, authorization, consent or order of or filing with any federal, state, local or foreign governmental or regulatory commission, board, body, authority or agency, or of or with the National Association of Securities Dealers Automated Quotation National Market System ("NASDAQ"), or approval of the stockholders of the Company, is required in connection with the issuance and sale of the Shares or the consummation by the Company of the transactions contemplated hereby other than registration of the Shares under the Act, which has been effected, and any necessary qualification under the securities or blue sky laws of the various jurisdictions in which the Shares are being offered by the Underwriters or under the rules and regulations of the NASD;

(k) except as expressly set forth in the Registration Statement and the Prospectus, (i) no person has the right, contractual or otherwise, to cause the Company to issue or sell to it any shares of Common Stock or shares of any other capital stock or other equity interests of the Company, (ii) no person has any preemptive rights, resale

rights, rights of first refusal or other rights to purchase any shares of Common Stock or shares of any other capital stock of or other equity interests in the Company and (iii) no person has the right to act as an underwriter or as a financial advisor to the Company in connection with the offer and sale of the Shares, in the case of each of the foregoing clauses (i), (ii) and (iii), whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Shares as contemplated thereby or otherwise; no person has the right, contractual or otherwise, to cause the Company to register under the Act any shares of Common Stock or shares of any other capital stock of or other equity interests in the Company, or to include any such shares or interests in the Registration Statement or the offering contemplated thereby, whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Shares as contemplated thereby or otherwise;

(l) each of the Company and the Subsidiaries has all necessary licenses, authorizations, consents and approvals and has made all necessary filings required under any federal, state, local or foreign law, regulation or rule, and has obtained all necessary licenses, authorizations, consents and approvals from other persons, in order to conduct its respective business; neither the Company nor any of the Subsidiaries is in violation of, or in default under, or has received notice of any proceedings relating to revocation or modification of, any such license, authorization, consent or approval or any federal, state, local or foreign law, regulation or rule or any decree, order or judgment applicable to the Company or any of the Subsidiaries, except where such violation, default, revocation or modification would not, individually or in the aggregate, have a Material Adverse Effect;

(m) all legal or governmental proceedings, affiliate transactions, off-balance sheet transactions (including, without limitation, transactions related to, and the existence of, "variable interest entities" within the meaning of Financial Accounting Standards Board Interpretation No. 46), contracts, licenses, agreements, leases or documents of a character required to be described in the Registration Statement or the Prospectus or to be filed as an exhibit to the Registration Statement have been so described or filed as required;

(n) there are no actions, suits, claims, investigations or proceedings pending or threatened or, to the Company's knowledge after due inquiry, contemplated to which the Company or any of the Subsidiaries or any of their respective directors or officers is or would be a party or of which any of their respective properties is or would be subject at law or in equity, before or by any federal, state, local or foreign governmental or regulatory commission, board, body, authority or agency, except any such action, suit, claim, investigation or proceeding which would not result in a judgment, decree or order having, individually or in the aggregate, a Material Adverse Effect or preventing consummation of the transactions contemplated hereby;

(o) Ernst & Young LLP, whose report on the consolidated financial statements of the Company and the Subsidiaries is included the Registration Statement and the Prospectus, are independent public accountants as required by the Act and by Rule 3600T of the Public Company Accounting Oversight Board (the "PCAOB");

PricewaterhouseCoopers LLP, whose report on the consolidated financial statements of the Company and the Subsidiaries is included the Registration Statement and the Prospectus, are independent public accountants as required by the Act and by Rule 3600T of the PCAOB;

(p) the financial statements included in the Registration Statement and the Prospectus, together with the related notes and schedules, present fairly the consolidated financial position of the Company and the Subsidiaries as of the dates indicated and the consolidated results of operations and cash flows of the Company and the Subsidiaries for the periods specified and have been prepared in compliance with the requirements of the Act and in conformity with generally accepted accounting principles applied on a consistent basis during the periods involved; any pro forma financial statements or data included in the Registration Statement and the Prospectus comply with the requirements of Regulation S-X of the Act, including, without limitation, Article 11 thereof, and the assumptions used in the preparation of such pro forma financial statements and data are reasonable, the pro forma adjustments used therein are appropriate to give effect to the transactions or circumstances described therein and the pro forma adjustments have been properly applied to the historical amounts in the compilation of those statements and data; the other financial and statistical data set forth in the Registration Statement and the Prospectus are accurately presented and prepared on a basis consistent with the financial statements and books and records of the Company; there are no financial statements (historical or pro forma) that are required to be included in the Registration Statement and the Prospectus (including, without limitation, as required by Rules 3-12 or 3-05 or Article 11 of Regulation S-X under the Act) that are not included as required; the Company and the Subsidiaries do not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations or any "variable interest entities" within the meaning of Financial Accounting Standards Board Interpretation No. 46), not disclosed in the Registration Statement and the Prospectus; and all disclosures contained in the Registration Statement or the Prospectus regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission) comply with Regulation G of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (collectively, the "Exchange Act") and Item 10 of Regulation S-K under the Act, to the extent applicable;

(q) subsequent to the respective dates as of which information is given in the Registration Statement and the Prospectus, there has not been (i) any material adverse change, or any development involving a prospective material adverse change, in the business, properties, management, financial condition or results of operations of the Company and the Subsidiaries taken as a whole, (ii) any transaction which is material to the Company and the Subsidiaries taken as a whole, (iii) any obligation, direct or contingent (including any off-balance sheet obligations), incurred by the Company or the Subsidiaries, which is material to the Company and the Subsidiaries taken as a whole, (iv) any change in the capital stock or outstanding indebtedness of the Company or the Subsidiaries or (v) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company;

(r) the Company has obtained for the benefit of the Underwriters the agreement (a "Lock-Up Agreement"), in the form set forth as Exhibit A hereto, of each of its directors and officers and each holder of shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock or any warrant or other right to purchase Common Stock or any such security;

(s) the Company is not and, after giving effect to the offering and sale of the Shares, will not be an "investment company" or an entity "controlled" by an "investment company," as such terms are defined in the Investment Company Act of 1940, as amended (the "Investment Company Act");

(t) the Company is not and, after giving effect to the offering and sale of the Shares, will not be a "holding company" or a "subsidiary company" of a "holding company" or an "affiliate" of a "holding company" or of a "subsidiary company," as such terms are defined in the Public Utility Holding Company Act of 1935, as amended (the "Public Utility Holding Company Act");

(u) the Company and each of the Subsidiaries have good and marketable title to all property (real and personal) described the Registration Statement or in the Prospectus as being owned by each of them, free and clear of all liens, claims, security interests or other encumbrances; all the property described in the Registration Statement and the Prospectus as being held under lease by the Company or a Subsidiary is held thereby under valid, subsisting and enforceable leases;

(v) the Company and the Subsidiaries own, or have obtained valid and enforceable licenses for, or other rights to use, the inventions, patent applications, patents, trademarks (both registered and unregistered), tradenames, service names, copyrights, trade secrets and other proprietary information described in the Registration Statement or the Prospectus as being owned or licensed by them or which are necessary for the conduct of their respective businesses, except where the failure to own, license or have such rights would not, individually or in the aggregate, have a Material Adverse Effect (collectively, "Intellectual Property"); (i) there are no third parties who have or, to the Company's knowledge after due inquiry, will be able to establish rights to any Intellectual Property, except for the ownership rights of the owners of the Intellectual Property which is licensed to the Company; (ii) there is no infringement by third parties of any Intellectual Property; (iii) there is no pending or threatened action, suit, proceeding or claim by others challenging the Company's rights in or to any Intellectual Property, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim; (iv) there is no pending or threatened action, suit, proceeding or claim by others challenging the validity or scope of any Intellectual Property, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim; (v) there is no pending or threatened action, suit, proceeding or claim by others that the Company or any Subsidiary infringes or otherwise violates any patent, trademark, tradename, service name, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim;

(vi) there is no patent or patent application that contains claims that interfere with the issued or pending claims of any of the Intellectual Property; and (vii) there is no prior art that may render any patent application owned by the Company or any Subsidiary of the Intellectual Property unpatentable that has not been disclosed to the U.S. Patent and Trademark Office;

(w) neither the Company nor any of the Subsidiaries is engaged in any unfair labor practice; except for matters which would not, individually or in the aggregate, have a Material Adverse Effect, (i) there is (A) no unfair labor practice complaint pending or, to the Company's knowledge after due inquiry, threatened against the Company or any of the Subsidiaries before the National Labor Relations Board, and no grievance or arbitration proceeding arising out of or under collective bargaining agreements is pending or threatened, (B) no strike, labor dispute, slowdown or stoppage pending or, to the Company's knowledge after due inquiry, threatened against the Company or any of the Subsidiaries and (C) no union representation dispute currently existing concerning the employees of the Company or any of the Subsidiaries, and (ii) to the Company's knowledge after due inquiry, (A) no union organizing activities are currently taking place concerning the employees of the Company or any of the Subsidiaries and (B) there has been no violation of any federal, state, local or foreign law relating to discrimination in the hiring, promotion or pay of employees, any applicable wage or hour laws or any provision of the Employee Retirement Income Security Act of 1974 ("ERISA") or the rules and regulations promulgated thereunder concerning the employees of the Company or any of the Subsidiaries;

(x) the Company and the Subsidiaries and their properties, assets and operations are in compliance with, and hold all permits, authorizations and approvals required under, Environmental Laws (as defined below), except to the extent that failure to so comply or to hold such permits, authorizations or approvals would not, individually or in the aggregate, have a Material Adverse Effect; there are no past, present or, to the Company's knowledge after due inquiry, reasonably anticipated future events, conditions, circumstances, activities, practices, actions, omissions or plans that could reasonably be expected to give rise to any material costs or liabilities to the Company or the Subsidiaries under, or to interfere with or prevent compliance by the Company or the Subsidiaries with, Environmental Laws; except as would not, individually or in the aggregate, have a Material Adverse Effect, neither the Company nor any of the Subsidiaries (i) is the subject of any investigation, (ii) has received any notice or claim, (iii) is a party to or affected by any pending or threatened action, suit or proceeding, (iv) is bound by any judgment, decree or order or (v) has entered into any agreement, in each case relating to any alleged violation of any Environmental Law or any actual or alleged release or threatened release or cleanup at any location of any Hazardous Materials (as defined below) (as used herein, "Environmental Law" means any federal, state, local or foreign law, statute, ordinance, rule, regulation, order, decree, judgment, injunction, permit, license, authorization or other binding requirement, or common law, relating to health, safety or the protection, cleanup or restoration of the environment or natural resources, including those relating to the distribution, processing, generation, treatment, storage, disposal, transportation, other handling or release or threatened release of

Hazardous Materials, and "Hazardous Materials" means any material (including, without limitation, pollutants, contaminants, hazardous or toxic substances or wastes) that is regulated by or may give rise to liability under any Environmental Law);

(y) in the ordinary course of its business, the Company and each of the Subsidiaries conducts a periodic review of the effect of the Environmental Laws on its business, operations and properties, in the course of which it identifies and evaluates associated costs and liabilities (including, without limitation, any capital or operating expenditures required for cleanup, closure of properties or compliance with the Environmental Laws or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties);

(z) all tax returns required to be filed by the Company and each of the Subsidiaries have been filed, and all taxes and other assessments of a similar nature (whether imposed directly or through withholding) including any interest, additions to tax or penalties applicable thereto due or claimed to be due from such entities have been paid, other than those being contested in good faith and for which adequate reserves have been provided;

(aa) the Company and each of the Subsidiaries maintains insurance covering its properties, operations, personnel and businesses as the Company deems adequate; such insurance insures against such losses and risks to an extent which is adequate in accordance with customary industry practice to protect the Company and the Subsidiaries and their businesses; all such insurance is fully in force on the date hereof and will be fully in force at the time of purchase and any additional time of purchase;

(bb) neither the Company nor any of the Subsidiaries has sustained since the date of the last audited financial statements included in the Registration Statement and the Prospectus any loss or interference with its respective business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree;

(cc) the Company has not sent or received any communication regarding termination of, or intent not to renew, any of the contracts or agreements referred to or described in, or filed as an exhibit to, the Registration Statement, and no such termination or non-renewal has been threatened by the Company or, to the Company's knowledge after due inquiry, any other party to any such contract or agreement;

(dd) the Company and each of the Subsidiaries maintains a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with

respect to any differences;

(ee) the Company has established and maintains and evaluates "disclosure controls and procedures" (as such term is defined in Rule 13a-14 and 15d-14 under the Exchange Act) and "internal control over financial reporting" (as such term is defined in Rule 13a-15 and 15d-15 under the Exchange Act); such disclosure controls and procedures are designed to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to the Company's Chief Executive Officer and its Chief Financial Officer by others within those entities, and such disclosure controls and procedures are effective to perform the functions for which they were established; the Company's auditors and the Audit Committee of the Board of Directors of the Company have been advised of: (i) any significant deficiencies in the design or operation of internal controls which could adversely affect the Company's ability to record, process, summarize, and report financial data; and (ii) any fraud, whether or not material, that involves management or other employees who have a role in the Company's internal controls; any material weaknesses in internal controls have been identified for the Company's auditors; and since the date of the most recent evaluation of such disclosure controls and procedures, there have been no significant changes in internal controls or in other factors that could significantly affect internal controls, including any corrective actions with regard to significant deficiencies and material weaknesses;

(ff) the Company has provided you true, correct and complete copies of all documentation pertaining to any extension of credit in the form of a personal loan made, directly or indirectly, by the Company or any Subsidiary to any director or executive officer of the Company, or to any family member or affiliate of any director or executive officer of the Company; and on or after July 30, 2002, the Company has not, directly or indirectly, including through any Subsidiary: (i) extended credit, arranged to extend credit, or renewed any extension of credit, in the form of a personal loan, to or for any director or executive officer of the Company, or to or for any family member or affiliate of any director or executive officer of the Company; or (ii) made any material modification, including any renewal thereof, to any term of any personal loan to any director or executive officer of the Company, or any family member or affiliate of any director or executive officer, which loan was outstanding on July 30, 2002;

(gg) all statistical or market-related data included in the Registration Statement or the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate, and the Company has obtained the written consent to the use of such data from such sources to the extent required;

(hh) neither the Company nor any of the Subsidiaries nor, to the Company's knowledge after due inquiry, any employee or agent of the Company or the Subsidiaries has made any payment of funds of the Company or the Subsidiaries or received or retained any funds in violation of any law, rule or regulation, which payment, receipt or retention of funds is of a character required to be disclosed in the Registration Statement or the Prospectus;

(ii) the preclinical tests and clinical trials that are described in, or the results of which are referred to in, the Registration Statement or the Prospectus were and, if still pending, are being conducted in accordance with protocols filed with the appropriate regulatory authorities for each such test or trial, as the case may be; the description of the results of such tests and trials contained in the Registration Statement or the Prospectus are accurate and complete, and the Company has no knowledge of any other studies or tests the results of which are inconsistent with, or otherwise call into question, the results described or referred to in the Registration Statement or the Prospectus; the Company has not received any notices or other correspondence from the Food and Drug Administration of the U.S. Department of Health and Human Services or any committee thereof or from any other governmental agency requiring the termination, suspension or modification of any clinical trials that are described or referred to in the Registration Statement or the Prospectus;

(jj) except pursuant to this Agreement, neither the Company nor any of the Subsidiaries has incurred any liability for any finder's or broker's fee or agent's commission in connection with the execution and delivery of this Agreement or the consummation of the transactions contemplated hereby or by the Prospectus;

(kk) neither the Company nor any of the Subsidiaries nor any of their respective directors, officers, affiliates or controlling persons has taken, directly or indirectly, any action designed, or which has constituted or might reasonably be expected to cause or result in, under the Exchange Act or otherwise, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Shares;

(ll) to the Company's knowledge after due inquiry, there are no affiliations or associations between any member of the NASD and any of the Company's officers, directors or 5% or greater securityholders, except as set forth in the Registration Statement and the Prospectus;

(mm) the Registration Statement, the Prospectus and any Preliminary Prospectus comply, and any further amendments or supplements thereto will comply, with any applicable laws or regulations of any foreign jurisdiction in which the Prospectus or any preliminary prospectus is distributed in connection with the Directed Share Program; and no approval, authorization, consent or order of or filing with any governmental or regulatory commission, board, body, authority or agency, other than those heretofore obtained, is required in connection with the offering of the Reserved Shares in any jurisdiction where the Reserved Shares are being offered; and

(nn) the Company has not offered, or caused the Underwriters to offer, Shares to any person pursuant to the Directed Share Program with the intent to influence unlawfully (i) a customer or supplier of the Company or any of the Subsidiaries to alter the customer's or supplier's level or type of business with the Company or any of the Subsidiaries, or (ii) a trade journalist or publication to write or publish favorable information about the Company or any of the Subsidiaries or any of their respective products or services.

In addition, any certificate signed by any officer of the Company or any of the Subsidiaries and delivered to the Underwriters or counsel for the Underwriters in connection with the offering of the Shares shall be deemed to be a representation and warranty by the Company or Subsidiary, as the case may be, as to matters covered thereby, to each Underwriter.

4. Certain Covenants of the Company. The Company hereby agrees:

(a) to furnish such information as may be required and otherwise to cooperate in qualifying the Shares for offering and sale under the securities or blue sky laws of such states or other jurisdictions as you may designate and to maintain such qualifications in effect so long as you may request for the distribution of the Shares; provided, however, that the Company shall not be required to qualify as a foreign corporation or to consent to the service of process under the laws of any such jurisdiction (except service of process with respect to the offering and sale of the Shares); and to promptly advise you of the receipt by the Company of any notification with respect to the suspension of the qualification of the Shares for offer or sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose;

(b) to make available to the Underwriters in New York City, as soon as practicable after the Registration Statement becomes effective, and thereafter from time to time to furnish to the Underwriters, as many copies of the Prospectus (or of the Prospectus as amended or supplemented if the Company shall have made any amendments or supplements thereto after the effective date of the Registration Statement) as the Underwriters may request for the purposes contemplated by the Act; in case any Underwriter is required to deliver a prospectus after the nine-month period referred to in Section 10(a)(3) of the Act in connection with the sale of the Shares, the Company will prepare, at its expense, promptly upon request such amendment or amendments to the Registration Statement and the Prospectus as may be necessary to permit compliance with the requirements of Section 10(a)(3) of the Act;

(c) if, at the time this Agreement is executed and delivered, it is necessary for the Registration Statement or any post-effective amendment thereto to be declared effective before the Shares maybe sold, the Company will endeavor to cause the Registration Statement or such post-effective amendment to become effective as soon as possible, and the Company will advise you promptly and, if requested by you, will confirm such advice in writing, (i) when the Registration Statement and any such post-effective amendment thereto has become effective, and (ii) if Rule 430A under the Act is used, when the Prospectus is filed with the Commission pursuant to Rule 424(b) under the Act (which the Company agrees to file in a timely manner under such Rule);

(d) to advise you promptly, confirming such advice in writing, of any request by the Commission for amendments or supplements to the Registration Statement or the Prospectus or for additional information with respect thereto, or of notice of institution of

proceedings for, or the entry of a stop order, suspending the effectiveness of the Registration Statement and, if the Commission should enter a stop order suspending the effectiveness of the Registration Statement, to use its best efforts to obtain the lifting or removal of such order as soon as possible; to advise you promptly of any proposal to amend or supplement the Registration Statement or the Prospectus and to provide you and Underwriters' counsel copies of any such documents for review and comment a reasonable amount of time prior to any proposed filing and to file no such amendment or supplement to which you shall object in writing;

(e) to file promptly all reports and any definitive proxy or information statement required to be filed by the Company with the Commission in order to comply with the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus is required in connection with the offering or sale of the Shares; to provide you with a copy of such reports and statements and other documents to be filed by the Company pursuant to Section 13, 14 or 15(d) of the Exchange Act during such period for your review and comment a reasonable amount of time prior to any proposed filing, and to file no such report, statement or document to which you shall object in writing; and to promptly notify you of any such filing;

(f) if necessary or appropriate, to file a registration statement pursuant to Rule 462(b) under the Act and pay the applicable fees in accordance with the Act;

(g) to advise the Underwriters promptly of the happening of any event within the time during which a prospectus relating to the Shares is required to be delivered under the Act which could require the making of any change in the Prospectus then being used so that the Prospectus would not include an untrue statement of material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they are made, not misleading, and, during such time, subject to Section 4(d) hereof, to prepare and furnish, at the Company's expense, to the Underwriters promptly such amendments or supplements to such Prospectus as may be necessary to reflect any such change;

(h) to make generally available to its security holders, and to deliver to you, an earnings statement of the Company (which will satisfy the provisions of Section 11(a) of the Act) covering a period of twelve months beginning after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act) as soon as is reasonably practicable after the termination of such twelve-month period but in any case not later than, March 1, 2005;

(i) to furnish to its stockholders as soon as practicable after the end of each fiscal year an annual report (including a consolidated balance sheet and statements of income, shareholders' equity and cash flow of the Company and the Subsidiaries for such fiscal year, accompanied by a copy of the certificate or report thereon of nationally recognized independent certified public accountants duly registered with the PCAOB);

(j) to furnish to you five (5) copies of the Registration Statement, as initially filed with the Commission, and of all amendments thereto (including all exhibits thereto) and sufficient copies of the foregoing (other than exhibits) for distribution of a copy to each of the other Underwriters;

(k) to furnish to you promptly and, upon request, to each of the other Underwriters for a period of five years from the date of this Agreement (i) copies of any reports, proxy statements, or other communications which the Company shall send to its stockholders or shall from time to time publish or publicly disseminate, (ii) copies of all annual, quarterly, transition and current reports filed with the Commission on Forms 10-K, 10-Q or 8-K, or such other similar forms as may be designated by the Commission, (iii) copies of documents or reports filed with any national securities exchange on which any class of securities of the Company is listed and (iv) such other information as you may reasonably request regarding the Company or the Subsidiaries;

(l) to furnish to you as early as practicable prior to the time of purchase and any additional time of purchase, as the case may be, but not later than two business days prior thereto, a copy of the latest available unaudited interim and monthly consolidated financial statements, if any, of the Company and the Subsidiaries which have been read by the Company's independent certified public accountants, as stated in their letter to be furnished pursuant to Section 6(e) hereof;

(m) to apply the net proceeds from the sale of the Shares in the manner set forth under the caption "Use of proceeds" in the Prospectus;

(n) to pay all costs, expenses, fees and taxes in connection with (i) the preparation and filing of the Registration Statement, each Preliminary Prospectus, the Prospectus and any amendments or supplements thereto, and the printing and furnishing of copies of each thereof to the Underwriters and to dealers (including costs of mailing and shipment), (ii) the registration, issue, sale and delivery of the Shares including any stock or transfer taxes and stamp or similar duties payable upon the sale, issuance or delivery of the Shares to the Underwriters, (iii) the producing, word processing and/or printing of this Agreement, any Agreement Among Underwriters, any dealer agreements, any Powers of Attorney and any closing documents (including compilations thereof) and the reproduction and/or printing and furnishing of copies of each thereof to the Underwriters and (except closing documents) to dealers (including costs of mailing and shipment), (iv) the qualification of the Shares for offering and sale under state or foreign laws and the determination of their eligibility for investment under state or foreign law as aforesaid (including the legal fees and filing fees and other disbursements of counsel for the Underwriters) and the printing and furnishing of copies of any blue sky surveys or legal investment surveys to the Underwriters and to dealers, (v) any listing of the Shares on any securities exchange or qualification of the Shares for quotation on the NASDAQ and any registration thereof under the Exchange Act, (vi) any filing for review of the public offering of the Shares by the NASD, including the legal fees and filing fees and other disbursements of counsel to the Underwriters, (vii) the fees and disbursements of any transfer agent or registrar for the Shares, (viii) the costs and expenses of the Company relating to presentations or meetings undertaken in connection with the

marketing of the offering and sale of the Shares to prospective investors and the Underwriters' sales forces, including, without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations, travel, lodging and other expenses incurred by the officers of the Company and any such consultants, and the cost of any aircraft chartered in connection with the road show, (ix) the offer and sale of the Reserved Shares, including all costs and expenses of Piper Jaffray and the Underwriters, including the fees and disbursement of counsel for the Underwriters, and (x) the performance of the Company's other obligations hereunder;

(o) not to sell, offer to sell, contract or agree to sell, hypothecate, pledge, grant any option to purchase or otherwise dispose of or agree to dispose of, directly or indirectly, any Common Stock or securities convertible into or exchangeable or exercisable for Common Stock or warrants or other rights to purchase Common Stock or any other securities of the Company that are substantially similar to Common Stock, or file or cause to be declared effective a registration statement under the Act relating to the offer and sale of any shares of Common Stock or securities convertible into or exercisable or exchangeable for Common Stock or warrants or other rights to purchase Common Stock or any other securities of the Company that are substantially similar to Common Stock for a period of 180 days after the date hereof (the "Lock-Up Period"), without the prior written consent of Piper Jaffray, except for (i) the registration of the Shares and the sales to the Underwriters pursuant to this Agreement, (ii) issuances of Common Stock upon the exercise of options or warrants disclosed as outstanding in the Registration Statement and the Prospectus, and (iii) the issuance of employee stock options not exercisable during the Lock-Up Period pursuant to stock option plans described in the Registration Statement and the Prospectus;

(p) prior to the time of purchase or the additional time of purchase, as the case may be, to issue no press release or other communication directly or indirectly and hold no press conferences with respect to the Company or any Subsidiary, the financial condition, results of operations, business, properties, assets, or liabilities of the Company or any Subsidiary, or the offering of the Shares, without your prior consent;

(q) to use its best efforts to cause the Common Stock to be listed for quotation on the NASDAQ and to maintain such listing;

(r) to maintain a transfer agent and, if necessary under the jurisdiction of incorporation of the Company, a registrar for the Common Stock; and

(s) to ensure that the Reserved Shares will be restricted from sale, transfer, assignment, pledge or hypothecation to such extent as may be required by the NASD and its rules for a period of three (3) months following the date of effectiveness of the Registration Statement (or such longer period of time as may be required by the NASD and its rules); provided, that Piper Jaffray will notify the Company as to which Directed Share Participants whose Reserved Shares are to be so restricted; to direct the transfer agent to place stop transfer restrictions upon such Reserved Shares for such period or

time; and to comply with all applicable securities and other applicable laws, rules and regulations in each jurisdiction in which the Reserved Shares are offered in connection with the Directed Share Program.

5. Reimbursement of Underwriters' Expenses. If the Shares are not delivered for any reason other than the termination of this Agreement pursuant to the fifth paragraph of Section 8 hereof or the default by one or more of the Underwriters in its or their respective obligations hereunder, the Company shall, in addition to paying the amounts described in Section 4(n) hereof, reimburse the Underwriters for all of their out-of-pocket expenses, including the fees and disbursements of their counsel.

6. Conditions of Underwriters' Obligations. The several obligations of the Underwriters hereunder are subject to the accuracy of the representations and warranties on the part of the Company on the date hereof, at the time of purchase and, if applicable, at the additional time of purchase, the performance by the Company of its obligations hereunder and to the following additional conditions precedent:

(a) The Company shall furnish to you at the time of purchase and, if applicable, at the additional time of purchase, an opinion of Heller Ehrman White & McAuliffe, LLP, counsel for the Company, addressed to the Underwriters, and dated the time of purchase or the additional time of purchase, as the case may be, with executed copies for each of the other Underwriters, and in form and substance satisfactory to Cooley Godward LLP, counsel for the Underwriters, in the form set forth in Exhibit B hereto.

(b) The Company shall furnish to you at the time of purchase and, if applicable, at the additional time of purchase, an opinion of Seed Intellectual Property Law Group PLLC, special counsel for the Company with respect to patents and proprietary rights, addressed to the Underwriters, and dated the time of purchase or the additional time of purchase, as the case may be, with executed copies for each of the other Underwriters, and in form and substance satisfactory to Cooley Godward LLP, counsel for the Underwriters, in the form set forth in Exhibit C hereto.

(c) The Company shall furnish to you at the time of purchase and, if applicable, at the additional time of purchase, an opinion of [Covington & Burling], special counsel for the Company with respect to regulatory matters, addressed to the Underwriters, and dated the time of purchase or the additional time of purchase, as the case may be, with executed copies for each of the other Underwriters, and in form and substance satisfactory to Cooley Godward LLP, counsel for the Underwriters, in the form set forth in Exhibit D hereto.

(d) The Company shall furnish to you at the time of purchase and, if applicable, at the additional time of purchase, an opinion of [Covington & Burling], litigation counsel for the Company, addressed to the Underwriters, and dated the time of purchase or the additional time of purchase, as the case may be, with executed copies for each of the other Underwriters, and in form and substance satisfactory to Cooley Godward LLP

counsel for the Underwriters, in the form set forth in Exhibit E hereto.

(e) You shall have received from Ernst & Young LLP letters dated, respectively, the date of this Agreement, the time of purchase and, if applicable, the additional time of purchase, and addressed to the Underwriters (with executed copies for each of the Underwriters) in the forms heretofore approved by Piper Jaffray.

(f) You shall have received from PricewaterhouseCoopers LLP letters dated, respectively, the date of this Agreement, the time of purchase and, if applicable, the additional time of purchase, and addressed to the Underwriters (with executed copies for each of the Underwriters) in the forms heretofore approved by Piper Jaffray.

(g) You shall have received at the time of purchase and, if applicable, at the additional time of purchase, the favorable opinion of Cooley Godward LLP, counsel for the Underwriters, dated the time of purchase or the additional time of purchase, as the case may be, in form and substance reasonably satisfactory to Piper Jaffray.

(h) No Prospectus or amendment or supplement to the Registration Statement or the Prospectus shall have been filed to which you object in writing.

(i) The Registration Statement shall become effective not later than 5:30 P.M., New York City time, on the date of this Agreement and, if Rule 430A under the Act is used, the Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act at or before 5:30 P.M., New York City time, on the second full business day after the date of this Agreement and any registration statement pursuant to Rule 462(b) under the Act required in connection with the offering and sale of the Shares shall have been filed and become effective no later than 10:00 P.M., New York City time, on the date of this Agreement.

(j) Prior to the time of purchase, and, if applicable, the additional time of purchase, (i) no stop order with respect to the effectiveness of the Registration Statement shall have been issued under the Act or proceedings initiated under Section 8(d) or 8(e) of the Act; (ii) the Registration Statement and all amendments thereto shall not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; and (iii) the Prospectus and all amendments or supplements thereto shall not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they are made, not misleading.

(k) Between the time of execution of this Agreement and the time of purchase or the additional time of purchase, as the case may be, (A) no material adverse change or any development involving a prospective material adverse change in the business, properties, management, financial condition or results of operations of the Company and the Subsidiaries taken as a whole shall occur or become known and (B) no transaction which is material and adverse to the Company has been entered into by the Company or any of the Subsidiaries.

(l) The Company will, at the time of purchase and, if applicable, at the additional time of purchase, deliver to you a certificate of its Chief Executive Officer and its Chief Financial Officer in the form attached as Exhibit F hereto.

(m) You shall have received signed Lock-up Agreements referred to in Section 3(r) hereof.

(n) The Company shall have furnished to you such other documents and certificates as to the accuracy and completeness of any statement in the Registration Statement and the Prospectus as of the time of purchase and, if applicable, the additional time of purchase, as you may reasonably request.

(o) The Shares shall have been approved for quotation on the NASDAQ, subject only to notice of issuance at or prior to the time of purchase or the additional time of purchase, as the case may be.

7. Effective Date of Agreement; Termination. This Agreement shall become effective (i) if Rule 430A under the Act is not used, when you shall have received notification of the effectiveness of the Registration Statement, or (ii) if Rule 430A under the Act is used, when the parties hereto have executed and delivered this Agreement.

The obligations of the several Underwriters hereunder shall be subject to termination in the absolute discretion of Piper Jaffray or any group of Underwriters (which may include Piper Jaffray) which has agreed to purchase in the aggregate at least 50% of the Firm Shares, if (x) since the time of execution of this Agreement or the earlier respective dates as of which information is given in the Registration Statement and the Prospectus, there has been any material adverse change or any development involving a prospective material adverse change in the business, properties, management, financial condition or results of operations of the Company and the Subsidiaries taken as a whole, which would, in Piper Jaffray's judgment or in the judgment of such group of Underwriters, make it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares on the terms and in the manner contemplated in the Registration Statement and the Prospectus, or (y) since of execution of this Agreement, there shall have occurred: (i) a suspension or material limitation in trading in securities generally on the New York Stock Exchange, the American Stock Exchange or the NASDAQ; (ii) a suspension or material limitation in trading in the Company's securities on NASDAQ; (iii) a general moratorium on commercial banking activities declared by either federal or New York State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) an outbreak or escalation of hostilities or acts of terrorism involving the United States or a declaration by the United States of a national emergency or war; or (v) any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in Piper Jaffray's judgment or in the judgment of such group of Underwriters makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares on the terms and in the manner contemplated in the Registration Statement and the Prospectus, or (z) since the time of execution

of this Agreement, there shall have occurred any downgrading, or any notice or announcement shall have been given or made of (i) any intended or potential downgrading or (ii) any watch, review or possible change that does not indicate an affirmation or improvement in the rating accorded any securities of or guaranteed by the Company or any Subsidiary by any "nationally recognized statistical rating organization," as that term is defined in Rule 436(g)(2) under the Act.

If Piper Jaffray or any group of Underwriters elects to terminate this Agreement as provided in this Section 7, the Company and each other Underwriter shall be notified promptly in writing.

If the sale to the Underwriters of the Shares, as contemplated by this Agreement, is not carried out by the Underwriters for any reason permitted under this Agreement, or if such sale is not carried out because the Company shall be unable to comply with any of the terms of this Agreement, the Company shall not be under any obligation or liability under this Agreement (except to the extent provided in Sections 4(n), 5 and 9 hereof), and the Underwriters shall be under no obligation or liability to the Company under this Agreement (except to the extent provided in Section 9 hereof) or to one another hereunder.

8. Increase in Underwriters' Commitments. Subject to Sections 6 and 7 hereof, if any Underwriter shall default in its obligation to take up and pay for the Firm Shares to be purchased by it hereunder (otherwise than for a failure of a condition set forth in Section 6 hereof or a reason sufficient to justify the termination of this Agreement under the provisions of Section 7 hereof) and if the number of Firm Shares which all Underwriters so defaulting shall have agreed but failed to take up and pay for does not exceed 10% of the total number of Firm Shares, the non-defaulting Underwriters shall take up and pay for (in addition to the aggregate number of Firm Shares they are obligated to purchase pursuant to Section 1 hereof) the number of Firm Shares agreed to be purchased by all such defaulting Underwriters, as hereinafter provided. Such Shares shall be taken up and paid for by such non-defaulting Underwriters in such amount or amounts as you may designate with the consent of each Underwriter so designated or, in the event no such designation is made, such Shares shall be taken up and paid for by all non-defaulting Underwriters pro rata in proportion to the aggregate number of Firm Shares set forth opposite the names of such non-defaulting Underwriters in Schedule A.

Without relieving any defaulting Underwriter from its obligations hereunder, the Company agrees with the non-defaulting Underwriters that it will not sell any Firm Shares hereunder unless all of the Firm Shares are purchased by the Underwriters (or by substituted Underwriters selected by you with the approval of the Company or selected by the Company with your approval).

If a new Underwriter or Underwriters are substituted by the Underwriters or by the Company for a defaulting Underwriter or Underwriters in accordance with the foregoing provision, the Company or you shall have the right to postpone the time of purchase for a period not exceeding five business days in order that any necessary changes in the Registration Statement and the Prospectus and other documents may be effected.

The term "Underwriter" as used in this Agreement shall refer to and include any Underwriter substituted under this Section 8 with like effect as if such substituted Underwriter had originally been named in Schedule A hereto.

If the aggregate number of Firm Shares which the defaulting Underwriter or Underwriters agreed to purchase exceeds 10% of the total number of Firm Shares which all Underwriters agreed to purchase hereunder, and if neither the non-defaulting Underwriters nor the Company shall make arrangements within the five business day period stated above for the purchase of all the Firm Shares which the defaulting Underwriter or Underwriters agreed to purchase hereunder, this Agreement shall terminate without further act or deed and without any liability on the part of the Company to any non-defaulting Underwriter and without any liability on the part of any non-defaulting Underwriter to the Company. Nothing in this paragraph, and no action taken hereunder, shall relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

9. Indemnity and Contribution.

(a) The Company agrees to indemnify, defend and hold harmless each Underwriter, its partners, directors and officers, and any person who controls any Underwriter within the meaning of Section 15 of the Act or Section 20 of the Exchange Act, and the successors and assigns of all of the foregoing persons, from and against any loss, damage, expense, liability or claim (including the reasonable cost of investigation) which, jointly or severally, any such Underwriter or any such person may incur under the Act, the Exchange Act, the common law or otherwise, insofar as such loss, damage, expense, liability or claim arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or in the Registration Statement as amended by any post-effective amendment thereof by the Company) or in a Prospectus (the term Prospectus for the purpose of this Section 9 being deemed to include any Preliminary Prospectus, the Prospectus and the Prospectus as amended or supplemented by the Company), or arises out of or is based upon any omission or alleged omission to state a material fact required to be stated in either such Registration Statement or such Prospectus or necessary to make the statements made therein not misleading, except insofar as any such loss, damage, expense, liability or claim arises out of or is based upon any untrue statement or alleged untrue statement of a material fact contained in, and in conformity with information concerning such Underwriter furnished in writing by or on behalf of such Underwriter through you to the Company expressly for use in, such Registration Statement or such Prospectus or arises out of or is based upon any omission or alleged omission to state a material fact in connection with such information required to be stated in such Registration Statement or such Prospectus or necessary to make such information not misleading, (ii) any untrue statement or alleged untrue statement made by the Company in Section 3 hereof or the failure by the Company to perform when and as required any agreement or covenant contained herein, (iii) any untrue statement or alleged untrue statement of any material fact contained in any audio or visual materials provided by the Company or based upon written information furnished by or on behalf of the Company including, without limitation, slides, videos, films or tape recordings used in connection with the marketing

of the Shares, or (iv) the Directed Share Program, provided that the Company shall not be responsible under this clause (iv) for any loss, damage, expense, liability or claim that is finally judicially determined to have resulted from the gross negligence or willful misconduct of the Underwriters in conducting the Directed Share Program.

If any action, suit or proceeding (each, a "Proceeding") is brought against an Underwriter or any such person in respect of which indemnity may be sought against the Company pursuant to the foregoing paragraph, such Underwriter or such person shall promptly notify the Company in writing of the institution of such Proceeding and the Company shall assume the defense of such Proceeding, including the employment of counsel reasonably satisfactory to such indemnified party and payment of all fees and expenses; provided, however, that the omission to so notify the Company shall not relieve the Company from any liability which the Company may have to any Underwriter or any such person or otherwise. Such Underwriter or such person shall have the right to employ its or their own counsel in any such case, but the fees and expenses of such counsel shall be at the expense of such Underwriter or of such person unless the employment of such counsel shall have been authorized in writing by the Company in connection with the defense of such Proceeding or the Company shall not have, within a reasonable period of time in light of the circumstances, employed counsel to have charge of the defense of such Proceeding or such indemnified party or parties shall have reasonably concluded that there may be defenses available to it or them which are different from, additional to or in conflict with those available to the Company (in which case the Company shall not have the right to direct the defense of such Proceeding on behalf of the indemnified party or parties), in any of which events such fees and expenses shall be borne by the Company and paid as incurred (it being understood, however, that the Company shall not be liable for the expenses of more than one separate counsel (in addition to any local counsel) in any one Proceeding or series of related Proceedings in the same jurisdiction representing the indemnified parties who are parties to such Proceeding). The Company shall not be liable for any settlement of any Proceeding effected without its written consent but, if settled with the written consent of the Company, the Company agrees to indemnify and hold harmless any Underwriter and any such person from and against any loss or liability by reason of such settlement. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by the second sentence of this paragraph, then the indemnifying party agrees that it shall be liable for any settlement of any Proceeding effected without its written consent if (i) such settlement is entered into more than 60 business days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall not have fully reimbursed the indemnified party in accordance with such request prior to the date of such settlement and (iii) such indemnified party shall have given the indemnifying party at least 30 days' prior notice of its intention to settle. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement of any pending or threatened Proceeding in respect of which any indemnified party is or could have been a party and indemnity could have been sought hereunder by such indemnified party, unless such settlement includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such Proceeding and does not include an admission of fault, culpability or a failure to act, by or on behalf of such indemnified party.

The Company agrees to indemnify, defend and hold harmless Piper Jaffray and its partners, directors and officers, and any person who controls Piper Jaffray within the meaning of Section 15 of the Act or Section 20 of the Exchange Act, and the successors and assigns of all of the foregoing persons, from and against any loss, damage, expense, liability or claim (including the reasonable cost of investigation) which, jointly or severally, Piper Jaffray or any such person may incur under the Act, the Exchange Act, the common law or otherwise, insofar as such loss, damage, expense, liability or claim (1) arises out of or is based upon (a) any of the matters referred to in clauses (i) through (iii) of the first paragraph of this Section 9(a), or (b) any untrue statement or alleged untrue statement of a material fact contained in any material prepared by or with the consent of the Company for distribution to Directed Share Participants in connection with the Directed Share Program or caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading; (2) caused by the failure of any Directed Share Participant to pay for and accept delivery of Reserved Shares that the Directed Share Participant has agreed to purchase; or (3) otherwise arises out of or is based upon the Directed Share Program, provided that the Company shall not be responsible under this clause (3) for any loss, damage, expense, liability or claim that is finally judicially determined to have resulted from the gross negligence or willful misconduct of Piper Jaffray in conducting the Directed Share Program. The second paragraph of this Section 9(a) shall apply equally to any Proceeding brought against Piper Jaffray or any such person in respect of which indemnity may be sought against the Company pursuant to the foregoing sentence, except that the Company shall be liable for the expenses of one separate counsel (in addition to any local counsel) for Piper Jaffray and any such person, separate and in addition to counsel for the Underwriters, in any such Proceeding.

(b) Each Underwriter severally agrees to indemnify, defend and hold harmless the Company, its directors and officers, and any person who controls the Company within the meaning of Section 15 of the Act or Section 20 of the Exchange Act, and the successors and assigns of all of the foregoing persons, from and against any loss, damage, expense, liability or claim (including the reasonable cost of investigation) which, jointly or severally, the Company or any such person may incur under the Act, the Exchange Act, the common law or otherwise, insofar as such loss, damage, expense, liability or claim arises out of or is based upon any untrue statement or alleged untrue statement of a material fact contained in, and in conformity with information concerning such Underwriter furnished in writing by or on behalf of such Underwriter through you to the Company expressly for use in, the Registration Statement (or in the Registration Statement as amended by any post-effective amendment thereof by the Company) or in a Prospectus, or arises out of or is based upon any omission or alleged omission to state a material fact in connection with such information required to be stated in such Registration Statement or such Prospectus or necessary to make such information not misleading.

If any Proceeding is brought against the Company or any such person in respect of which indemnity may be sought against any Underwriter pursuant to the foregoing paragraph, the Company or such person shall promptly notify such Underwriter in writing of the institution of such Proceeding and such Underwriter shall assume the defense of such Proceeding, including the employment of counsel reasonably satisfactory to such indemnified party and payment of all fees and expenses; provided, however, that the omission to so notify such Underwriter shall not relieve such Underwriter from any liability which such Underwriter may have to the Company or any such person or otherwise. The Company or such person shall have the right to employ its own counsel in any such case, but the fees and expenses of such counsel shall be at the expense of the Company or such person unless the employment of such counsel shall have been authorized in writing by such Underwriter in connection with the defense of such Proceeding or such Underwriter shall not have, within a reasonable period of time in light of the circumstances, employed counsel to defend such Proceeding or such indemnified party or parties shall have reasonably concluded that there may be defenses available to it or them which are different from or additional to or in conflict with those available to such Underwriter (in which case such Underwriter shall not have the right to direct the defense of such Proceeding on behalf of the indemnified party or parties, but such Underwriter may employ counsel and participate in the defense thereof but the fees and expenses of such counsel shall be at the expense of such Underwriter), in any of which events such fees and expenses shall be borne by such Underwriter and paid as incurred (it being understood, however, that such Underwriter shall not be liable for the expenses of more than one separate counsel (in addition to any local counsel) in any one Proceeding or series of related Proceedings in the same jurisdiction representing the indemnified parties who are parties to such Proceeding). No Underwriter shall be liable for any settlement of any such Proceeding effected without the written consent of such Underwriter but, if settled with the written consent of such Underwriter, such Underwriter agrees to indemnify and hold harmless the Company and any such person from and against any loss or liability by reason of such settlement. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by the second sentence of this paragraph, then the indemnifying party agrees that it shall be liable for any settlement of any Proceeding effected without its written consent if (i) such settlement is entered into more than 60 business days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement and (iii) such indemnified party shall have given the indemnifying party at least 30 days' prior notice of its intention to settle. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement of any pending or threatened Proceeding in respect of which any indemnified party is or could have been a party and indemnity could have been sought hereunder by such indemnified party, unless such settlement includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such Proceeding.

(c) If the indemnification provided for in this Section 9 is unavailable to an indemnified party under subsections (a) and (b) of this Section 9 or insufficient to hold an indemnified party harmless in respect of any losses, damages, expenses, liabilities or claims referred to therein, then each applicable indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, damages, expenses, liabilities or claims (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other hand from the offering of the Shares or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and of the Underwriters on the other in connection with the statements or omissions which resulted in such losses, damages, expenses, liabilities or claims, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same respective proportions as the total proceeds from the offering (net of underwriting discounts and commissions but before deducting expenses) received by the Company, and the total underwriting discounts and commissions received by the Underwriters, bear to the aggregate public offering price of the Shares. The relative fault of the Company on the one hand and of the Underwriters on the other shall be determined by reference to, among other things, whether the untrue statement or alleged untrue statement of a material fact or omission or alleged omission relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The amount paid or payable by a party as a result of the losses, damages, expenses, liabilities and claims referred to in this subsection shall be deemed to include any legal or other fees or expenses reasonably incurred by such party in connection with investigating, preparing to defend or defending any Proceeding.

(d) The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 9 were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation that does not take account of the equitable considerations referred to in subsection (c) above. Notwithstanding the provisions of this Section 9, no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by such Underwriter and distributed to the public were offered to the public exceeds the amount of any damage which such Underwriter has otherwise been required to pay by reason of such untrue statement or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations to contribute pursuant to this Section 9 are several in proportion to their respective underwriting commitments and not joint.

(e) The indemnity and contribution agreements contained in this Section 9 and the covenants, warranties and representations of the Company contained in this Agreement shall remain in full force and effect regardless of any investigation made by or on behalf of any Underwriter, its partners, directors or officers or any person

(including each partner, officer or director of such person) who controls any Underwriter within the meaning of Section 15 of the Act or Section 20 of the Exchange Act, or by or on behalf of the Company, its directors or officers or any person who controls the Company within the meaning of Section 15 of the Act or Section 20 of the Exchange Act, and shall survive any termination of this Agreement or the issuance and delivery of the Shares. The Company and each Underwriter agree promptly to notify each other of the commencement of any Proceeding against it and, in the case of the Company, against any of the Company's officers or directors in connection with the issuance and sale of the Shares, or in connection with the Registration Statement or the Prospectus.

10. Information Furnished by the Underwriters. The statements set forth in the [eleventh] and [twelfth] paragraphs under the caption "Underwriting" in the Prospectus, only insofar as such statements relate to the amount of selling concession and reallowance or to over-allotment and stabilization activities that may be undertaken by the Underwriters, constitute the only information furnished by or on behalf of the Underwriters as such information is referred to in Sections 3 and 9 hereof.

11. Notices. Except as otherwise herein provided, all statements, requests, notices and agreements shall be in writing or by telegram and, if to the Underwriters, shall be sufficient in all respects if delivered or sent to Piper Jaffray & Co., 800 Nicollet Mall, Suite 800, Minneapolis, MN 55402, Attention: Syndicate Department and, if to the Company, shall be sufficient in all respects if delivered or sent to the Company at the offices of the Company at 1124 Columbia Street, Suite 130, Seattle, Washington 98104, Attention: Ronald J. Berenson, MD.

12. Governing Law; Construction. This Agreement and any claim, counterclaim or dispute of any kind or nature whatsoever arising out of or in any way relating to this Agreement ("Claim"), directly or indirectly, shall be governed by, and construed in accordance with, the laws of the State of New York. The section headings in this Agreement have been inserted as a matter of convenience of reference and are not a part of this Agreement.

13. Submission to Jurisdiction. Except as set forth below, no Claim may be commenced, prosecuted or continued in any court other than the courts of the State of New York located in the City and County of New York or in the United States District Court for the Southern District of New York, which courts shall have jurisdiction over the adjudication of such matters, and the Company consents to the jurisdiction of such courts and personal service with respect thereto. The Company hereby consents to personal jurisdiction, service and venue in any court in which any Claim arising out of or in any way relating to this Agreement is brought by any third party against Piper Jaffray or any indemnified party. Each of Piper Jaffray and the Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) waives all right to trial by jury in any action, proceeding or counterclaim (whether based upon contract, tort or otherwise) in any way arising out of or relating to this Agreement. The Company agrees that a final judgment in any such action, proceeding or counterclaim brought in any such court shall be conclusive and binding upon the Company and may be enforced in any other courts to the jurisdiction of which the Company is or may be subject, by suit upon such judgment.

14. Parties at Interest. The Agreement herein set forth has been and is made solely for the benefit of the Underwriters and the Company and to the extent provided in Section 9 hereof the controlling persons, partners, directors and officers referred to in such Section, and their respective successors, assigns, heirs, personal representatives and executors and administrators. No other person, partnership, association or corporation (including a purchaser, as such purchaser, from any of the Underwriters) shall acquire or have any right under or by virtue of this Agreement.

15. Counterparts. This Agreement may be signed by the parties in one or more counterparts which together shall constitute one and the same agreement among the parties.

16. Successors and Assigns. This Agreement shall be binding upon the Underwriters and the Company and their successors and assigns and any successor or assign of any substantial portion of the Company's and any of the Underwriters' respective businesses and/or assets.

[*The Remainder of This Page Intentionally Left Blank; Signature Page Follows*]

If the foregoing correctly sets forth the understanding between the Company and the several Underwriters, please so indicate in the space provided below for that purpose, whereupon this agreement and your acceptance shall constitute a binding agreement between the Company and the Underwriters, severally.

Very truly yours,

XCYTE THERAPIES, INC.

By: _____

Name:
Title:

Accepted and agreed to as of the
date first above written, on
behalf of themselves
and the other several Underwriters
named in Schedule A

PIPER JAFFRAY & CO.
RBC CAPITAL MARKETS CORPORATION
WELLS FARGO SECURITIES, LLC
JMP SECURITIES LLC

By: PIPER JAFFRAY & CO.

By: _____

Name:
Title:

By: _____

Name:
Title:

SCHEDULE A

Underwriter	Number of Firm Shares
PIPER JAFFRAY & CO.	[____]
RBC CAPITAL MARKETS CORPORATION	[____]
WELLS FARGO SECURITIES, LLC	[____]
JMP SECURITIES LLC	[____]
Total	[____]

Exhibit 4.1

[LOGO of Xcyte Therapies]

COMMON STOCK
SHARES

CUSIP 98389F 10 1

SEE REVERSE FOR
CERTAIN
DEFINITIONS

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

FULLY PAID AND NONASSESSABLE SHARES OF COMMON STOCK, PAR VALUE $.001 PER SHARE, OF

XCYTE THERAPIES, INC.

CERTIFICATE OF STOCK

Transferable on the books of the Corporation by the holder hereof in person or by duly authorized attorney upon surrender of this certificate properly endorsed. This certificate is not valid until countersigned by the transfer Agent and Registrar.

WITNESS the facsimile seal of the Corporation and the facsimile signatures of its duly authorized officers.

Dated: **[Seal of Xcyte Therapies, Inc.]**

/s/ Joanna S. Black
Secretary

/s/ Ronald Jay Berenson
President and Chief Executive Officer

COUNTERSIGNED AND REGISTERED:

AMERICAN STOCK TRANSFER AND TRUST COMPANY

By: **Transfer Agent**
And Registrar;

Authorized Signature

NUMBER
XT-

[LOGO of Xcyte Therapies]

COMMON STOCK
SHARES

CUSIP 98389F 10 1

SEE REVERSE FOR CERTAIN DEFINITIONS

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

FULLY PAID AND NONASSESSABLE SHARES OF COMMON STOCK, PAR VALUE $.001 PER SHARE, OF

XCYTE THERAPIES, INC.

CERTIFICATE OF STOCK

Transferable on the books of the Corporation by the holder hereof in person or by duly authorized attorney upon surrender of this certificate properly endorsed. This certificate is not valid until countersigned by the transfer Agent and Registrar.

WITNESS the facsimile seal of the Corporation and the facsimile signatures of its duly authorized officers.

Dated:

[Seal of Xcyte Therapies, Inc.]

/s/ Joanna S. Black
Secretary

/s/ Ronald Jay Berenson
President and Chief Executive Officer

COUNTERSIGNED AND REGISTERED:

AMERICAN STOCK TRANSFER AND TRUST COMPANY

By:

Transfer Agent
And Registrar;

Authorized Signature

XCYTE THERAPIES, INC.

THE CORPORATION WILL FURNISH WITHOUT CHARGE TO EACH STOCKHOLDER WHO SO REQUEST A STATEMENT OF THE POWERS. DESIGNATIONS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OR SERIES THEREOF OF THE CORPORATION, AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS OF SUCH PREFERENCES AND/OR RIGHTS. SUCH REQUEST MAY BE MADE TO THE CORPORATION OR THE TRANSFER AGENT.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM-	as tenants in common	UNIF GIFT MIN ACT-	_____ Custodian _____ (Cust) (Minor) Under Uniform Gifts to Minors Act _____ (State)
TEN ENT-	as tenants by the entities		
NT-	as joint tenants with right of survivorship and not as tenants in common	UNIF TRF MIN ACT-	_____ Custodian (until age _____) (Cust) _____ Under Uniform Transfers to Minors (Minor) Act _____ (State)

Additional abbreviations may also be used though not in the above list.

For Value received, _____ hereby sell, assign and transfer unto

PLEASE INSERT SOCIAL SECURITY OR OTHER
IDENTIFYING NUMBER OF ASSIGNEE

_____

_____

_____

PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS OF ASSIGNEE

_____

_____

_____

_____

_____

_____ Shares of the capital stock represented by the within Certificate, and do hereby irrevocably constitute and appoint _____
_____ Attorney to transfer the said stock on the books of the within named Corporation with full power of substitution in the premises.

Dated, _____.

X .

_____

NOTICE: THE SIGNATURE TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE, IN EVERY PARTICULAR WITHOUT ALTERATION OR ENLARGEMENT, OR ANY CHANGE WHATEVER.

SIGNATURE GUARANTEED: _____.

THE SIGNATURE(S) MUST BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (BANKS, STOCKBROKERS, SAVING AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM) PURSUANT TO S.E.C. RULE 17 Ad-18.

Exhibit 5.1

_____, 2004

The Board of Directors
Xcyte Therapies, Inc.
1124 Columbia Street, Suite 130
Seattle, WA 98104

Ladies and Gentlemen:

This opinion is furnished to Xcyte Therapies, Inc., a Delaware corporation (the "Company"), in connection with the filing with the Securities and Exchange Commission of a Registration Statement on Form S-1 (the "Registration Statement"), as it may be amended, to the Securities Act of 1933, as amended (the "Securities Act"), relating to the proposed offer and sale of up to 4,000,000 shares of the Company's common stock, par value $0.001 per share (the "Common Stock").

We have reviewed, among other things, the Registration Statement, the Company's Certificate of Incorporation and Bylaws, each as amended, and the records of corporate proceedings and other actions taken or proposed to be taken by the Company in connection with the authorization, issuance and sale of the Common Stock. We have made such other factual inquiries as we deemed necessary to render this opinion.

Based upon the foregoing and in reliance thereon, it is our opinion that the Common Stock, when sold and after receipt of payment therefore as contemplated in the Registration Statement, will be validly issued, fully paid and non-assessable.

This opinion is rendered to you in connection with the Registration Statement and is solely for your benefit and the benefit of the purchasers of the Common Stock. This opinion may not be relied upon by you for any other purpose, or relied upon by any other person, firm, corporation or other entity for any purpose, without our prior written consent. We disclaim any obligation to advise you of any change of law that occurs, or any facts of which we may become aware, after the date of this opinion.

We express no opinion herein as to the laws of any state or jurisdiction other than the state of Washington and the federal laws of the United States.

We hereby authorize and consent to the use of this opinion as an exhibit to the Registration Statement and to all references to us in the Registration Statement and any amendments thereto.

Very truly yours,

Heller Ehrman White &McAuliffe LLP

Exhibit 10.18

THE SECURITIES REPRESENTED BY THIS WARRANT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AND HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISTRIBUTION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL IN A FORM SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933

Warrant No. WPF-4
Date of Issuance: November 7, 2003

Number of Shares: 848
(subject to adjustment)

XCYTE THERAPIES, INC.

Series F Preferred Stock Purchase Warrant

Xcyte Therapies, Inc., a Delaware corporation (the "Company"), for value received, hereby certifies that Oxford Finance Corporation, or its registered assigns (the "Registered Holder"), is entitled, subject to the terms set forth below, to purchase from the Company, at any time after the date hereof and on or before the Expiration Date (as defined in Section 7 below), up to 848 shares of Series F Preferred Stock of the Company ("Preferred Stock"), at a purchase price of $2.78 per share. The shares purchasable upon exercise of this Warrant and the purchase price per share, as adjusted from time to time pursuant to the provisions of this Warrant, are hereinafter referred to as the "Warrant Stock" and the 'Purchase Price," respectively.

1. Exercise.

(a) **Manner of Exercise.** This Warrant may be exercised by the Registered Holder, in whole or in part, by surrendering this Warrant, with the purchase/exercise form appended hereto as Exhibit A duly executed by such Registered Holder or by such Registered Holder's duly authorized attorney, at the principal office of the Company, or at such other office or agency as the Company may designate, accompanied by payment in full of the Purchase Price payable in respect of the number of shares of Warrant Stock purchased upon such exercise. The Purchase Price may be paid by cash, check, wire transfer or by the surrender of promissory notes or other instruments representing indebtedness of the Company to the Registered Holder.

(b) **Effective Time of Exercise.** Each exercise of this Warrant shall be deemed to have been effected immediately prior to the close of business on the day on which this Warrant shall have been surrendered to the Company as provided in Section 1(a) above. At such time, the person or persons in whose name or names any certificates for Warrant Stock shall be issuable upon such exercise as provided in Section 1(d) below shall be deemed to have become the holder or holders of record of the Warrant Stock represented by such certificates.

(c) **Net Issue Exercise.**

(i) In lieu of exercising this Warrant in the manner provided above in Section 1(a), the Registered Holder may elect to receive shares equal to the value of this Warrant

(or the portion thereof being canceled) by surrender of this Warrant at the principal office of the Company together with notice of such election on the purchase/exercise form appended hereto as Exhibit A duly executed by such Registered Holder or such Registered Holder's duly authorized attorney, in which event the Company shall issue to such Registered Holder a number of shares of Warrant Stock computed using the following formula:

$$X = \frac{Y(AB)}{A}$$

Where X = The number of shares of Warrant Stock to be issued to the Registered Holder.

Y = The number of shares of Warrant Stock purchasable under this Warrant (at the date of such calculation).

A = The fair market value of one share of Warrant Stock (at the date of such calculation).

B = The Purchase Price (as adjusted to the date of such calculation).

(ii) For purposes of this Section 1(c), the fair market value of Warrant Stock on the date of calculation shall mean with respect to each share of Warrant Stock:

(A) if the exercise is in connection with an initial public offering of the Common Stock of the Company (the "Common Stock"), and if the Company's Registration Statement relating to such public offering has been declared effective by the Securities and Exchange Commission, then the fair market value shall be the product of (x) the initial "Price to Public" per share specified in the final prospectus with respect to the offering and (y) the number of shares of Common Stock into which each share of Warrant Stock is convertible at the date of calculation;

(B) if this Warrant is exercised after, and not in connection with, the Company's initial public offering, and the Company's Common Stock is traded on a securities exchange or The Nasdaq Stock Market or actively traded over the counter:

(1) if the Company's Common Stock is traded on a securities exchange or The Nasdaq Stock Market, the fair market value shall be decreed to be the product of (x) the average of the closing prices over a 30-day period ending three days before the date of calculation and (y) the number of shares of Common Stock into which each share of Warrant Stock is convertible on such date; or

(2) if the Company's Common Stock is actively traded over the counter, the fair market value shall be deemed to be the product of (x) the avenge of the closing bid or sales price (whichever is applicable) over the 30-day period ending three days before the date of calculation and (y) the number of shares of Common Stock into which each share of Warrant Stock is convertible on such date; or

(C) if neither (A) nor (B) is applicable, the fair market value of Warrant Stock shall be at the highest price per share which the Company could obtain on the date of calculation from a willing buyer (not a current employee or director) for shares of Warrant Stock sold by the Company, from authorized but unissued shares, as determined in good faith by the Board of Directors, unless the Company is at such time subject to an acquisition as described in Section 7(b) below, in which case the fair market value of Warrant Stock shall be deemed to be the value received by the holders of such stock pursuant to such acquisition.

(d) **Delivery to Registered Holder.** As soon as practicable after the exercise of this Warrant in whole or in part, and in any event within ten (10) days thereafter, the Company at its expense will cause to be issued in the name of, and delivered to, the Registered Holder, or as such Registered Holder (upon payment by such Registered Holder of any applicable transfer taxes) may direct:

(i) a certificate or certificates for the number of shares of Warrant Stock to which such Registered Holder shall be entitled, and

(ii) in case such exercise is in part only, a new warrant or warrants (dated the date hereof) of like tenor, calling in the aggregate on the face or faces thereof for the number of shares of Warrant Stock equal (without giving effect to any adjustment therein) to the number of such shares called for on the face of this Warrant minus the number of such shares purchased by the Registered Holder upon such exercise as provided in Section 1(a) or 1(c) above.

2. **Adjustments.**

(a) **Redemption or Conversion of Preferred Stock.** If all of the Preferred Stock is redeemed or converted into shares of Common Stock, then this Warrant shall automatically become exercisable for that number of shares of Common Stock equal to the number of shares of Common Stock that would have been received if this Warrant had been exorcised in full and the shares of Preferred Stock received thereupon had been simultaneously converted into shares of Common Stock immediately prior to such event, and the Exercise Price shall be automatically adjusted to equal the number obtained by dividing (i) the aggregate Purchase Price of the shares of Preferred Stock for which this Warrant was exercisable immediately prior to such redemption or conversion, by (ii) the number of shares of Common Stock for which this Warrant is exercisable immediately after such redemption or conversion.

(b) **Stock Splits and Dividends.** If outstanding shares of the Company's Preferred Stock shall be subdivided into a greater number of shares or a dividend in Preferred Stock shall be paid in respect of Preferred Stock, the Purchase Price in effect immediately prior to such subdivision or at the record date of such dividend shall simultaneously with the effectiveness of such subdivision or immediately after the record date of such dividend be proportionately reduced. If outstanding shares of Preferred Stock shall be combined into a smaller number of shares, the Purchase Price in effect immediately prior to such combination shall, simultaneously with the effectiveness of such combination, be proportionately increased. When any adjustment is required to be made in the Purchase Price, the number of shares of Warrant Stock purchasable upon the exercise of this Warrant shall be changed to the number determined by dividing (i) an amount equal to the number of shares issuable upon the exercise of this Warrant immediately prior to such adjustment, multiplied by the Purchase Price in effect immediately prior to such adjustment, by (ii) the Purchase Price in effect immediately after such adjustment.

(c) **Reclassification, Etc.** In case there occurs any reclassification or change of the outstanding securities of the Company or of any reorganization of the Company (or any other corporation the stock or securities of which are at the time receivable upon the exercise of this Warrant) or any similar corporate reorganization on or after the date hereof, then and in each such case the Registered Holder, upon the exercise hereof at any time after the consummation of such reclassification, change, or reorganization shall be entitled to receive, in lieu of the stock or other securities and property receivable upon the exercise hereof prior to such consummation, the stock or other securities or property to which such Registered Holder would have been entitled upon such consummation if such Registered Holder had exercised this Warrant immediately prior thereto, all subject to further adjustment pursuant to the provisions of this Section 2.

(d) **Adjustment Certificate.** When any adjustment is required to be made in the Warrant Stock or the Purchase Price pursuant to this Section 2, the Company shall promptly mail to the Registered Holder a certificate setting forth (i) a brief statement of the facts requiring such adjustment, (ii) the Purchase Price after such adjustment and (iii) the kind and amount of stock or other securities or property into which this Warrant shall be exercisable after such adjustment.

(e) **Acknowledgment.** In order to avoid doubt, it is acknowledged that the holder of this Warrant shall be entitled to the benefit of all adjustments in the number of shares of Common Stock of the Company issuable upon conversion of the Preferred Stock of the Company which occur prior to the exercise of this Warrant, including without limitation, any increase in the number of shares of Common Stock issuable upon conversion as a result of a dilutive issuance of capital stock.

3. Transfers.

(a) **Unregistered Security.** Each holder of this Warrant acknowledges that this Warrant, the Warrant Stock and the Common Stock of the Company have not been registered under the Securities Act of 1933, as amended (the "Securities Act", and agrees not to sell, pledge. distribute, offer for sale, transfer or otherwise dispose of this Warrant, any Warrant Stock issued upon its exercise or any Common Stock issued upon conversion of the Warrant Stock in the absence of (i) an effective registration statement under the Securities Act as to this Warrant, such Warrant Stock or such Common Stock and registration or qualification of this Warrant, such Warrant Stock or such Common Stock under any applicable U.S. federal or state securities law then in effect, or (ii) an exemption from registration or qualification under the Securities Act. Each certificate or other instrument for Warrant Stock issued upon the exercise of this Warrant shall bear a legend substantially to the foregoing effect.

(b) **Transferability.** Subject to the provisions of Sections 3(a) and 6 hereof, this Warrant and all rights hereunder are transferable, in whole or in part, upon surrender of the Warrant with a properly executed assignment (in the form of Exhibit B hereto) at the principal office of the Company; provided, however, that this Warrant may not be transferred in whole or in part without the prior written consent of the Company.

(c) **Warrant Register.** The Company will maintain a register containing the names and addresses of the Registered Holders of this Warrant. Until any transfer of this Warrant is made in the warrant register, the Company may treat the Registered Holder of this Warrant as the absolute owner hereof for all purposes; provided, however, that if this Warrant is properly assigned in blank, the Company may (but shall not be required to) treat the bearer hereof as the absolute owner hereof for all purposes, notwithstanding any notice to the contrary. Any

Registered Holder may change such Registered Holder's address as shown on the warrant register by written notice to the Company requesting such change.

4. **No Impairment.** The Company will not, by amendment of its charter or through reorganization, consolidation, merger, dissolution, sale of assets or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will (subject to Section 15 below) at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the holder of this Warrant against impairment.

5. **Representations and Warranties of the Registered Holder.** The Registered Holder hereby represents and warrants to the Company that:

(a) **Authorization.** The Registered Holder has full power and authority to enter into this Warrant. The Warrant, when executed and delivered by the Registered Holder, will constitute a valid and legally binding obligation of the Registered Holder, enforceable in accordance with its terms, except as limited by applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance, and any other laws of general application affecting enforcement of creditors' rights generally, and as limited by laws relating to the availability of specific performance, injunctive relief, or other equitable remedies.

(b) **Purchase Entirely for Own Account**. This Warrant is issued to the Registered Holder in reliance upon the Registered Holder's representation to the Company, which by the Registered Holder's acceptance of this Warrant, the Registered Holder hereby confirms, that the Warrant to be acquired by the Registered Holder, the Warrant Stock and the Common Stock to be issued upon the conversion of the Warrant Stock (collectively, the "Securities") will be acquired for investment for the Registered Holder's own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof, and that the Registered Holder has no present intention of selling, granting any participation in, or otherwise distributing the same. By accepting this Warrant, the Registered Holder further represents that the Registered Holder does not presently have any contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participations to such person or to any third person, with respect to any of the Securities. The Registered Holder has not been formed for the specific purpose of acquiring the Securities.

(c) **Disclosure of Information.** The Registered Holder has had an opportunity to discuss the Company's business, management, financial affairs and the terms and conditions of the offering of the Securities with the Company's management and has had an opportunity to review the Company's facilities. The Registered Holder understands that such discussions, as well as any written information delivered by the Company to the Registered Holder, were intended to describe the aspects of the Company's business which it believes to be Material.

(d) **Restricted Securities.** The Registered Holder understands that the Securities have not been, and will not be, registered under the Securities Act, by reason of a specific exemption from the registration provisions of the Securities Act which depends upon, among other things, the bona ride nature of the investment intent and the accuracy of the Registered Holder's representations ~ expressed herein. The Registered Holder understands that the Securities are "restricted securities" under applicable U.S. federal and state securities laws and that, pursuant to these laws, the Registered Holder must hold the Securities indefinitely unless they are registered with the Securities and Exchange Commission and qualified by state authorities, or an exemption from such registration and qualification requirements is available.

The Registered Holder acknowledges that the Company has no obligation to register or qualify the Securities for resale. The Registered Holder further acknowledges that if an exemption from registration or qualification is available, it may be conditioned on various requirements including, but not limited to, the time and manner of sale, the holding period for the Securities, and on requirements relating to the Company which are outside of the Registered Holder's control, and which the Company is under no obligation and may not be able to satisfy.

(e) **No Public Market.** The Registered Holder understands that no public market now exists for any of the securities issued by the Company, and that the Company has made no assurances that a public market will ever exist for the Securities.

(f) **Accredited or Sophisticated Investor.** The Registered Holder is an accredited investor as defined in Rule 501(a) of Regulation D promulgated under the Securities Act.

6. **Lock-up Agreement.**

(a) **Lock-up Period: Agreement.** In connection with the initial public offering of the Company's securities and upon request of the Company or the underwriters managing such offering of the Company's securities, the Registered Holder agrees not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed 180 days) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the Company's initial public offering.

(b) **Stop-Transfer Instructions.** In order to enforce the foregoing covenants, the Company may impose stop-transfer instructions with respect to the securities of the Registered Holder (and the securities of every other person subject to the restrictions in Section 6(a)).

(c) **Transferees Bound.** The Registered Holder agrees that prior to the Company's initial public offering it will not transfer securities of the Company unless each transferee agrees in writing to be bound by all of the provisions of this Section 6.

7. **Termination.** This Warrant (and the right to purchase securities upon exercise hereof) shall terminate upon the earliest to occur of the following (the "Expiration Date"): (a) 7 years from the issuance date, (b) the sale, conveyance or disposal of all or substantially all of the Company's property or business or the Company's merger with or into or consolidation with any other corporation (other than a wholly-owned subsidiary of the Company) or any other transaction or series of related transactions in which more than fifty percent (50%) of the voting power of the Company is disposed of, provided that this Section 7 shall not apply to a merger effected exclusively for the purpose of changing the domicile of the Company or to an equity financing in which the Company is the surviving corporation, or (c) the closing of a firm commitment underwritten public offering pursuant to a registration statement under the Securities Act.

8. **Notices of Certain Transactions.** In case:

(a) the Company shall take a record of the holders of Its Preferred Stock (or other stock or securities at the time deliverable upon the exercise of this Warrant) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of stock of any class or any other securities, or to receive any other right, or

(b) of any capital reorganization of the Company, any reclassification of the capital stock of the Company, any consolidation or merger of the Company with or into another corporation (other than a consolidation or merger in which the Company is the surviving entity), or any transfer of all or substantially all of the assets of the Company, or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Company, or

(d) of any redemption of the Preferred Stock or mandatory conversion of the Preferred Stock into Common Stock of the Company,

then, and in each such case, the Company will mail or cause to be mailed to the Registered Holder of this Warrant a notice specifying, as the case may be, (1) the date on which a record is to be taken for the purpose of such dividend, distribution or right, and stating the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation, winding-up, redemption or conversion is to take place, and the time, if any is to be fixed, as of which the holders of record of Preferred Stock (or such other stock or securities at the time deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation, winding-up, redemption or conversion) are to be determined. Such notice shall be mailed at least ten (10) days prior to the record date or effective date for the event specified in such notice.

9. **Reservation of Stock.** The Company will at all times reserve and keep available, solely for the issuance and delivery upon the exercise of this Warrant, such shares of Warrant Stock and other stock, securities and property, as from time to time shall be issuable upon the exercise of this Warrant.

10. **Exchange of Warrants.** Upon the surrender by the Registered Holder of any Warrant or Warrants, properly endorsed, to the Company at the principal office of the Company, the Company will, subject to the provisions of Section 3 hereof, issue and deliver to or upon the order of such Registered Holder, at the Company's expense, a new Warrant or Warrants of like tenor, in the name of such Registered Holder or as such Registered Holder (upon payment by such Registered Holder of any applicable transfer taxes) may direct, calling in the aggregate on the face or faces thereof for the number of shares of Preferred Stock called for on the face or faces of the Warrant or Warrants so surrendered.

11. **Replacement of Warrants.** Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and (in the case of loss, theft or destruction) upon delivery of an indemnity agreement (with surety if reasonably required) in an amount reasonably satisfactory to the Company, or (in the case of mutilation) upon surrender and cancellation of this Warrant, the Company will issue, in lieu thereof, a new Warrant of like tenor.

12. **No Right as Stockholder.** Until the exercise of this Warrant, the Registered Holder of this Warrant shall not have or exercise any rights by virtue hereof as a stockholder of the Company.

13. **No Fractional Shares.** No fractional shares of Preferred Stock will be issued in connection with any exercise hereunder. In lieu of any fractional shares which would otherwise be issuable, the Company shall pay cash equal to the product of such fraction multiplied by the fair market value of one share of Preferred Stock on the date of exercise, as determined in good faith by the Company's Board of Directors.

14. **Amendment or Waiver.** Any term of this Warrant may be amended or waived only by an instrument in writing signed by the party against which enforcement of the amendment or waiver is sought.

15. **Headings.** The headings in this Warrant are for purposes of reference only and shall not limit or otherwise affect the meaning of any provision of this Warrant.

16. **Governing Law.** This Warrant shall be governed, construed and interpreted in accordance with the laws of the State of Washington, without giving effect to principles of conflicts of law.

17. **Survival Representations.** Unless otherwise set forth in this Warrant, the warranties, representations and covenants of die Company and the Purchasers contained in or made pursuant to this Warrant shall survive the execution arid delivery of this Warrant.

18. **Transfer; Successors and Assigns.** The terms and conditions of this Warrant shall inure to the benefit of and be binding upon the respective successors and assigns of the parties. Nothing in this Warrant, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Warrant, except as expressly provided in this Warrant.

19. **Counterparts.** This Warrant may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

20. **Attorney's Fees.** If any action at law or in equity (including arbitration) is necessary to enforce or interpret the terms of any of this Warrant, the prevailing party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which such party may be entitled.

21. **Severability.** If one or more provisions of this Warrant are held to be unenforceable under applicable law, the parties agree to renegotiate such provision in good faith. In the event that the parties cannot reach a mutually agreeable and enforceable replacement for such provision, then (a) such provision shall be excluded from this Warrant, (b) the balance of this Warrant shall be interpreted as if such provision were so excluded and (c) the balance of this Warrant shall be enforceable in accordance with its terms.

22. **Delays or Omissions.** No delay or omission to exercise any right, power or remedy accruing to any party under this Warrant, upon any breach or default of any other party under this Warrant, shall impair any such right, power or remedy of such non-breaching or non-defaulting party nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or of or in any similar breach or default thereafter occurring: nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent or approval of any kind or character on the part of any party of any breach or default under this Warrant, or any waiver on the part of any party of any provisions or conditions of this Warrant, must be in writing and shall be effective only to the extent specifically set forth in such writing. All remedies, either under this Warrant or by law or otherwise afforded to any party, shall be cumulative and not alternative.

23. **Notices.** Any notice required or permitted by this Warrant shall be in writing and shall be deemed sufficient upon delivery, when delivered personally or by overnight courier or sent by fax, or 48 hours after being deposited in the U.S. mail, as certified or registered mail, with postage prepaid, addressed to the party to be notified at such party's address as set forth on the signature page, or as subsequently modified by written notice.

24. **Entire Agreement.** This Warrant, and the documents referred to herein constitute the entire agreement between the parties hereto pertaining to the subject matter hereof, and any and all other written or oral agreements relating to the subject matter hereof existing between the parties hereto are expressly canceled.

XCYTE THERAPIES, INC.

By: /s/ Ronald J. Berenson

Ronald J. Berenson. M.D., President

Address: 1124 Columbia Street
Suite 130
Seattle, WA 98104

Fax Number: (206) 262-0900

Accepted and Agreed:

REGISTERED HOLDER

/s/ Michael J. Altenburger

Oxford Finance Corporation

Address: l33 North Fairfax Street
Alexandria, VA 22314

Fax Number (703) 519-5225

EXHIBIT A

PURCHASE/EXERCISE FORM

To: Xcyte Therapies, Inc. Dated:

The undersigned, pursuant to the provisions set forth in the attached Warrant No. WPF-4, hereby irrevocably elects to (a) purchase _____ shares of the Preferred Stock covered by such Warrant and herewith makes payment of $_____, representing the full purchase price for such shares at the price per share provided for in such Warrant, or (b) exercise such Warrant for _____ shares purchasable under the Warrant pursuant to the Net Issue Exercise provisions of Section 1(c) of the Warrant.

The undersigned acknowledges that it has reviewed the representations and warranties contained in Section 5 of the Warrant and by its signature below hereby makes such representations and warranties to the Company as of the date hereof.

Signature: _____

Name (print): _____

Title (if applic.): _____

Company (if applic.): _____

EXHIBIT B

ASSIGNMENT FORM

FOR VALUE RECEIVED, _____ hereby sells, assigns and transfers all of the rights of the undersigned under the attached Warrant with respect to the number of shares of Series F Preferred Stock covered thereby set forth below, unto:

Name of Assignee	Address/Fax Number	No. of Shares

Dated: _____ Signature: _____

_____

Witness: _____

Exhibit 10.19

THE SECURITIES REPRESENTED BY THIS WARRANT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AND HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISTRIBUTION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL IN A FORM SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933.

Warrant No. WPF-5 Number of Shares: 4,208
Date of Issuance: December 19, 2003 (subject to adjustment)

XCYTE THERAPIES, INC.

Series F Preferred Stock Purchase Warrant

Xcyte Therapies, Inc., a Delaware corporation (the "Company"), for value received, hereby certifies that Oxford Finance Corporation, or its registered assigns (the "Registered Holder"), is entitled, subject to the terms set forth below, to purchase from the Company, at any time after the date hereof and on or before the Expiration Date (as defined in Section 7 below), up to 4,208 shares of Series F Preferred Stock of the Company ("Preferred Stock"), at a purchase price of $2.78 per share. The shares purchasable upon exercise of this Warrant and the purchase price per share, as adjusted from time to time pursuant to the provisions of this Warrant, are hereinafter referred to as the "Warrant Stock" and the "Purchase Price," respectively.

1. **Exercise**.

(a) **Manner of Exercise**. This Warrant may be exercised by the Registered Holder, in whole or in part, by surrendering this Warrant, with the purchase/exercise form appended hereto as Exhibit A duly executed by such Registered Holder or by such Registered Holder's duly authorized attorney, at the principal office of the Company, or at such other office or agency as the Company may designate, accompanied by payment in full of the Purchase Price payable in respect of the number of shares of Warrant Stock purchased upon such exercise. The Purchase Price may be paid by cash, check, wire transfer or by the surrender of promissory notes or other instruments representing indebtedness of the Company to the Registered Holder.

(b) **Effective Time of Exercise**. Each exercise of this Warrant shall be deemed to have been effected immediately prior to the close of business on the day on which this Warrant shall have been surrendered to the Company as provided in Section 1(a) above. At such time, the person or persons in whose name or names any certificates for Warrant Stock shall be issuable upon such exercise as provided in Section 1(d) below shall be deemed to have become the holder or holders of record of the Warrant Stock represented by such certificates.

(c) **Net Issue Exercise**.

(i) In lieu of exercising this Warrant in the manner provided above in Section 1(a), the Registered Holder may elect to receive shares equal to the value of this Warrant (or the portion thereof being canceled) by surrender of this Warrant at the principal office of the

Company together with notice of such election on the purchase/exercise form appended hereto as Exhibit A duly executed by such Registered Holder or such Registered Holder's duly authorized attorney, in which event the Company shall issue to such Registered Holder a number of shares of Warrant Stock computed using the following formula:

$$X = \frac{Y\,(A - B)}{A}$$

Where X = The number of shares of Warrant Stock to be issued to the Registered Holder.

Y = The number of shares of Warrant Stock purchasable under this Warrant (at the date of such calculation).

A = The fair market value of one share of Warrant Stock (at the date of such calculation).

B = The Purchase Price (as adjusted to the date of such calculation).

(ii) For purposes of this Section 1(c), the fair market value of Warrant Stock on the date of calculation shall mean with respect to each share of Warrant Stock:

(A) if the exercise is in connection with an initial public offering of the Common Stock of the Company (the "Common Stock"), and if the Company's Registration Statement relating to such public offering has been declared effective by the Securities and Exchange Commission, then the fair market value shall be the product of (x) the initial "Price to Public" per share specified in the final prospectus with respect to the offering and (y) the number of shares of Common Stock into which each share of Warrant Stock is convertible at the date of calculation;

(B) if this Warrant is exercised after, and not in connection with, the Company's initial public offering, and the Company's Common Stock is traded on a securities exchange or The Nasdaq Stock Market or actively traded over the counter:

(1) if the Company's Common Stock is traded on a securities exchange or The Nasdaq Stock Market, the fair market value shall be deemed to be the product of (x) the average of the closing prices over a 30-day period ending three days before the date of calculation and (y) the number of shares of Common Stock into which each share of Warrant Stock is convertible on such date; or

(2) if the Company's Common Stock is actively traded over the counter, the fair market value shall be deemed to be the product of(x) the average of the closing bid or sales price (whichever is applicable) over the 30-day period ending three days before the date of calculation and (y) the number of shares of Common Stock into which each share of Warrant Stock is convertible on such date; or

(C) if neither (A) nor (B) is applicable, the fair market value of Warrant Stock shall be at the highest price per share which the Company could obtain on the date of calculation from a willing buyer (not a current employee or director) for shares of

Warrant Stock sold by the Company, from authorized but unissued shares, as determined in good faith by the Board of Directors, unless the Company is at such time subject to an acquisition as described in Section 7(b) below, in which case the fair market value of Warrant Stock shall be deemed to be the value received by the holders of such stock pursuant to such acquisition.

(d) **Delivery to Registered Holder**. As soon as practicable after the exercise of this Warrant in whole or in part, and in any event within ten (10) days thereafter, the Company at its expense will cause to be issued in the name of, and delivered to, the Registered Holder, or as such Registered Holder (upon payment by such Registered Holder of any applicable transfer taxes) may direct:

(i) a certificate or certificates for the number of shares of Warrant Stock to which such Registered Holder shall be entitled, and

(ii) in case such exercise is in part only, a new warrant or warrants (dated the date hereof) of like tenor, calling in the aggregate on the face or faces thereof for the number of shares of Warrant Stock equal (without giving effect to any adjustment therein) to the number of such shares called for on the face of this Warrant minus the number of such shares purchased by the Registered Holder upon such exercise as provided in Section 1(a) or 1(c) above.

2. **Adjustments**.

(a) **Redemption or Conversion of Preferred Stock**. If all of the Preferred Stock is redeemed or converted into shares of Common Stock, then this Warrant shall automatically become exercisable for that number of shares of Common Stock equal to the number of shares of Common Stock that would have been received if this Warrant had been exercised in full and the shares of Preferred Stock received thereupon bad been simultaneously converted into shares of Common Stock immediately prior to such event, and the Exercise Price shall be automatically adjusted to equal the number obtained by dividing (i) the aggregate Purchase Price of the shares of Preferred Stock for which this Warrant was exercisable immediately prior to such redemption or conversion, by (ii) the number of shares of Common Stock for which this Warrant is exercisable immediately after such redemption or conversion.

(b) **Stock Splits and Dividends**. If outstanding shares of the Company's Preferred Stock shall be subdivided into a greater number of shares or a dividend in Preferred Stock shall be paid in respect of Preferred Stock, the Purchase Price in effect immediately prior to such subdivision or at the record date of such dividend shall simultaneously with the effectiveness of such subdivision or immediately after the record date of such dividend be proportionately reduced. If outstanding shares of Preferred Stock shall be combined into a smaller number of shares, the Purchase Price in effect immediately prior to such combination shall, simultaneously with the effectiveness of such combination, be proportionately increased. When any adjustment is required to be made in the Purchase Price, the number of shares of Warrant Stock purchasable upon the exercise of this Warrant shall be changed to the number determined by dividing (1) an amount equal to the number of shares issuable upon the exercise of this Warrant immediately prior to such adjustment, multiplied by the Purchase Price in effect

immediately prior to such adjustment, by (ii) the Purchase Price in effect immediately after such adjustment.

(c) **Reclassification, Etc.** In case there occurs any reclassification or change of the outstanding securities of the Company or of any reorganization of the Company (or any other corporation the stock or securities of which are at the time receivable upon the exercise of this Warrant) or any similar corporate reorganization on or after the date hereof, then and in each such case the Registered Holder, upon the exercise hereof at any time after the consummation of such reclassification, change, or reorganization shall be entitled to receive, in lieu of the stock or other securities and property receivable upon the exercise hereof prior to such consummation, the stock or other securities or property to which such Registered Holder would have been entitled upon such consummation if such Registered Holder had exercised this Warrant immediately prior thereto, all subject to further adjustment pursuant to the provisions of this Section 2.

(d) **Adjustment Certificate**. When any adjustment is required to be made in the Warrant Stock or the Purchase Price pursuant to this Section 2, the Company shall promptly mail to the Registered Holder a certificate setting forth (i) a brief statement of the facts requiring such adjustment, (ii) the Purchase Price after such adjustment and (iii) the kind and amount of stock or other securities or property into which this Warrant shall be exercisable after such adjustment.

(e) **Acknowledgement**. In order to avoid doubt, it is acknowledged that the holder of this Warrant shall be entitled to the benefit of all adjustments in the number of shares of Common Stock of the Company issuable upon conversion of the Preferred Stock of the Company which occur prior to the exercise of this Warrant, including without limitation, any increase in the number of shares of Common Stock issuable upon conversion as a result of a dilutive issuance of capital stock.

3. **Transfers**.

(a) **Unregistered Security**. Each holder of this Warrant acknowledges that this Warrant, the Warrant Stock and the Common Stock of the Company have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), and agrees not to sell, pledge, distribute, offer for sale, transfer or otherwise dispose of this Warrant, any Warrant Stock issued upon its exercise or any Common Stock issued upon conversion of the Warrant Stock in the absence of (i) an effective registration statement under the Securities Act as to this Warrant, such Warrant Stock or such Common Stock and registration or qualification of this Warrant, such Warrant Stock or such Common Stock under any applicable U.S. federal or state securities law then in effect, or (ii) an exemption from registration or qualification under the Securities Act. Each certificate or other instrument for Warrant Stock issued upon the exercise of this Warrant shall bear a legend substantially to the foregoing effect.

(b) **Transferability**. Subject to the provisions of Sections 3(a) and 6 hereof, this Warrant and all rights hereunder are transferable, in whole or in part, upon surrender of the Warrant with a properly executed assignment (in the form of Exhibit B hereto) at the principal office of the Company; provided, however, that this Warrant may not be transferred in whole or in part without the prior written consent of the Company.

(c) **Warrant Register**. The Company will maintain a register containing the names and addresses of the Registered Holders of this Warrant. Until any transfer of this Warrant is made in the warrant register, the Company may treat the Registered Holder of this Warrant as the absolute owner hereof for all purposes; provided, however, that if this Warrant is properly assigned in blank, the Company may (but shall not be required to) treat the bearer hereof as the absolute owner hereof for all purposes, notwithstanding any notice to the contrary. Any Registered Holder may change such Registered Holder's address as shown on the warrant register by written notice to the Company requesting such change.

4. **No Impairment**. The Company will not, by amendment of its charter or through reorganization, consolidation, merger, dissolution, sale of assets or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will (subject to Section 15 below) at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the holder of this Warrant against impairment.

5. **Representations and Warranties of the Registered Holder**. The Registered Holder hereby represents and warrants to the Company that:

(a) **Authorization**. The Registered Holder has full power and authority to enter into this Warrant. The Warrant, when executed and delivered by the Registered Holder, will constitute a valid and legally binding obligation of the Registered Holder, enforceable in accordance with its terms, except as limited by applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance, and any other laws of general application affecting enforcement of creditors' rights generally, and as limited by laws relating to the availability of specific performance, injunctive relief, or other equitable remedies.

(b) **Purchase Entirely for Own Account**. This Warrant is issued to the Registered Holder in reliance upon the Registered Holder's representation to the Company, which by the Registered Holder's acceptance of this Warrant, the Registered Holder hereby confirms, that the Warrant to be acquired by the Registered Holder, the Warrant Stock and the Common Stock to be issued upon the conversion of the Warrant Stock (collectively, the "Securities") will be acquired for investment for the Registered Holder's own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof, and that the Registered Holder has no present intention of selling, granting any participation in, or otherwise distributing the same. By accepting this Warrant, the Registered Holder further represents that the Registered Holder does not presently have any contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participations to such person or to any third person, with respect to any of the Securities. The Registered Holder has not been formed for the specific purpose of acquiring the Securities.

(c) **Disclosure of Information**. The Registered Holder has had an opportunity to discuss the Company's business, management, financial affairs and the terms and conditions of the offering of the Securities with the Company's management and has had an opportunity to review the Company's facilities. The Registered Holder understands that such discussions, as well as any written information delivered by the Company to the Registered Holder, were intended to describe the aspects of the Company's business which it believes to be material.

(d) **Restricted Securities**. The Registered Holder understands that the Securities have not been, and will not be, registered under the Securities Act, by reason of a specific exemption from the registration provisions of the Securities Act which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of the Registered Holder's representations as expressed herein. The Registered Holder understands that the Securities are "restricted securities" under applicable U.S. federal and state securities laws and that, pursuant to these laws, the Registered Holder must hold the Securities indefinitely unless they are registered with the Securities and Exchange Commission and qualified by state authorities, or an exemption from such registration and qualification requirements is available. The Registered Holder acknowledges that the Company has no obligation to register or qualify the Securities for resale, The Registered Holder further acknowledges that if an exemption front registration or qualification is available, it may be conditioned on various requirements including, but not limited to, the time and manner of sale, the holding period for the Securities, and on requirements relating to the Company which are outside of the Registered Holder's control, and which the Company is under no obligation and may not be able to satisfy.

(e) **No Public Market**. The Registered Holder understands that no public market now exists for any of the securities issued by the Company, and that the Company has made no assurances that a public market will ever exist for the Securities.

(f) **Accredited or Sophisticated Investor**. The Registered Holder is an accredited investor as defined in Rule 501(a) of Regulation D promulgated under the Securities Act.

6. **Lock-up Agreement**.

(a) **Lock-up Period; Agreement**. In connection with the initial public offering of the Company's securities and upon request of the Company or the underwriters managing such offering of the Company's securities, the Registered Holder agrees not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed 180 days) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the Company's initial public offering.

(b) **Stop-Transfer Instructions**. In order to enforce the foregoing covenants, the Company may impose stop-transfer instructions with respect to the securities of the Registered Holder (and the securities of every other person subject to the restrictions in Section 6(a)).

(c) **Transferees Bound**. The Registered Holder agrees that prior to the Company's initial public offering it will not transfer securities of the Company unless each transferee agrees in writing to be bound by all of the provisions of this Section 6.

7. **Termination**. This Warrant (and the right to purchase securities upon exercise hereof) shall terminate upon the earliest to occur of the following (the "Expiration Date"): (a)

December 19, 2010, (b) the sale, conveyance or disposal of all or substantially all of the Company's property or business or the Company's merger with or into or consolidation with any other corporation (other than a wholly-owned subsidiary of the Company) or any other transaction or series of related transactions in which more than fifty percent (50%) of the voting power of the Company is disposed of, provided that this Section 7 shall not apply to a merger effected exclusively for the purpose of changing the domicile of the Company or to an equity financing in which the Company is the surviving corporation, or (c) the closing of a firm commitment underwritten public offering pursuant to a registration statement under the Securities Act.

8. **Notices of Certain Transactions**. In case:

(a) the Company shall take a record of the holders of its Preferred Stock (or other stock or securities at the time deliverable upon the exercise of this Warrant) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of stock of any class or any other securities, or to receive any other right, or

(b) of any capital reorganization of the Company, any reclassification of the capital stock of the Company, any consolidation or merger of the Company with or into another corporation (other than a consolidation or merger in which the Company is the surviving entity), or any transfer of all or substantially all of the assets of the Company, or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Company, or

(d) of any redemption of the Preferred Stock or mandatory conversion of the Preferred Stock into Common Stock of the Company,

then, and in each such case, the Company will mail or cause to be mailed to the Registered Holder of this Warrant a notice specifying, as the case may be, (i) the date on which a record is to be taken for the purpose of such dividend, distribution or right, and stating the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation, winding-up, redemption or conversion is to take place, and the time, if any is to be fixed, as of which the holders of record of Preferred Stock (or such other stock or securities at the time deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation, winding-up, redemption or conversion) are to be determined. Such notice shall be mailed at least ten (10) days prior to the record date or effective date for the event specified in such notice.

9. **Reservation of Stock**. The Company will at all times reserve and keep available, solely for the issuance and delivery upon the exercise of this Warrant, such shares of Warrant Stock and other stock, securities and property, as from time to time shall be issuable upon the exercise of this Warrant.

10. **Exchange of Warrants**. Upon the surrender by the Registered Holder of any Warrantor Warrants, properly endorsed, to the Company at the principal office of the Company, the Company will, subject to the provisions of Section 3 hereof, issue and deliver to or upon the

order of such Registered Holder, at the Company's expense, a new Warrant or Warrants of like tenor, in the name of such Registered Holder or as such Registered Holder (upon payment by such Registered Holder of any applicable transfer taxes) may direct, calling in the aggregate on the face or faces thereof for the number of shares of Preferred Stock called for on the face or faces of the Warrant or Warrants so surrendered.

11. **Replacement of Warrants**. Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and (in the case of loss, theft or destruction) upon delivery of an indemnity agreement (with surety if reasonably required) in an amount reasonably satisfactory to the Company, or (in the case of mutilation) upon surrender and cancellation of this Warrant, the Company will issue, in lieu thereof, a new Warrant of like tenor.

12. **No Rights as Stockholder**. Until the exercise of this Warrant, the Registered Holder of this Warrant shall not have or exercise any rights by virtue hereof as a stockholder of the Company.

13. **No Fractional Shares**. No fractional shares of Preferred Stock will be issued in connection with any exercise hereunder. In lieu of any fractional shares which would otherwise be issuable, the Company shall pay cash equal to the product of such fraction multiplied by the fair market value of one share of Preferred Stock on the date of exercise, as determined in good faith by the Company's Board of Directors.

14. **Amendment or Waiver**. Any term of this Warrant may be amended or waived only by an instrument in writing signed by the party against which enforcement of the amendment or waiver is sought.

15. **Headings**. The headings in this Warrant are for purposes of reference only and shall not limit or otherwise affect the meaning of any provision of this Warrant

16. **Governing Law**. This Warrant shall be governed, construed and interpreted in accordance with the laws of the State of Washington, without giving effect to principles of conflicts of law.

17. **Survival of Representations**. Unless otherwise set forth in this Warrant, the warranties, representations and covenants of the Company and the Purchasers contained in or made pursuant to this Warrant shall survive the execution and delivery of this Warrant.

18. **Transfer: Successors and Assigns**. The terms and conditions of this Warrant shall inure to the benefit of and be binding upon the respective successors and assigns of the parties. Nothing in this Warrant, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Warrant, except as expressly provided in this Warrant.

19. **Counterparts**. This Warrant may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

20. **Attorney's Fees**. If any action at law or in equity (including arbitration) is necessary to enforce or interpret the terms of any of this Warrant, the prevailing party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which such party may be entitled.

21. **Severability**. If one or more provisions of this Warrant are held to he unenforceable under applicable law, the parties agree to renegotiate such provision in good faith. In the event that the parties cannot reach a mutually agreeable and enforceable replacement for such provision, then (a) such provision shall be excluded from this Warrant, (b) the balance of this Warrant shall be interpreted as if such provision were so excluded and (c) the balance of this Warrant shall be enforceable in accordance with its terms.

22. **Delays or Omissions**. No delay or omission to exercise any right, power or remedy accruing to any party under this Warrant, upon any breach or default of any other party under this Warrant, shall impair any such right, power or remedy of such non-breaching or non-defaulting party nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or of or in any similar breach or default thereafter occurring; nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent or approval of any kind or character on the part of any party of any breach or default under this Warrant, or any waiver on the part of any party of any provisions or conditions of this Warrant, must be in writing and shall be effective only to the extent specifically set forth in such writing. All remedies, either under this Warrant or by law or otherwise afforded to any party, shall be cumulative and not alternative.

23. **Notices**. Any notice required or permitted by this Warrant shall be in writing and shall be deemed sufficient upon delivery, when delivered personally or by overnight courier or sent by fax, or 48 hours after being deposited in the U.S. mail, as certified or registered mail, with postage prepaid, addressed to the party to be notified at such party's address as set forth on the signature page, or as subsequently modified by written notice.

24. **Entire Agreement**. This Warrant, and the documents referred to herein constitute the entire agreement between the parties hereto pertaining to the subject matter hereof, and any and all other written or oral agreements relating to the subject matter hereof existing between the parties hereto are expressly canceled.

XCYTE THERAPIES, INC.

By: /s/ Ronald J. Berenson

Ronald J. Berenson, M.D., President

Address: 1124 Columbia Street
Suite 130
Seattle, WA 98104

Fax Number: (206) 262-0900

Accepted and Agreed:

REGISTERED HOLDER

/s/ Michael J. Altenburger

Oxford Finance Corporation

Address: 133 N. Fairfax Street
Alexandria, VA 22314

Fax Number: 703-519-5225

EXHIBIT A

PURCHASE/EXERCISE FORM

To: Xcyte Therapies, Inc. Dated:

The undersigned, pursuant to the provisions act forth in the attached Warrant No. WPF-5, hereby irrevocably elects to (a) purchase _____ shares of the Preferred Stock covered by such Warrant and herewith makes payment of $_____, representing the full purchase price for such shares at the price per share provided for in such Warrant, or (b) exercise such Warrant for _____ shares purchasable under the Warrant pursuant to the Net Issue Exercise provisions of Section 1(c) of the Warrant,

The undersigned acknowledges that it has reviewed the representations and warranties contained in Section 5 of the Warrant and by its signature below hereby makes such representations and warranties to the Company as of the date hereof

Signature: _____

Name (print): _____

Title (if applic.): _____

Company.(if applic.): _____

EXHIBIT B

ASSIGNMENT FORM

FOR VALUE RECEIVED, _____ hereby sells, assigns and transfers all of the rights of the undersigned under the attached Warrant with respect to the number of shares of Series F Preferred Stock covered thereby set forth below, unto:

Name of Assignee	Address/Fax Number	No. of Shares

Dated: _____

Signature: _____

_____

Witness: _____

EXHIBIT 10.26

THIRD AMENDMENT TO LEASE

THIS THIRD AMENDMENT TO LEASE (this "**Third Amendment**") is made as of this 12th day of November, 2003, by and between **ALEXANDRIA REAL ESTATE EQUITIES, INC.**, a Maryland corporation ("**Landlord**"), and **XCYTE THERAPIES, INC.**, a Delaware corporation ("**Tenant**").

RECITALS

A. Landlord and Tenant have entered into that certain Lease Agreement dated as of June 21, 1999 (the "**Original Lease**"), pursuant to which Landlord leases to Tenant certain premises containing approximately 20,659 rentable square feet in the building located at 1124 Columbia Street, Seattle, Washington (the "**Building**"), and more particularly described in the Original Lease (the "**Original Premises**").

B. Pursuant to that certain First Amendment to Lease dated as of October 23, 2001 (the "**First Amendment**"), Landlord and Tenant amended the Original Lease to, among other things, add the Expansion Space (as defined in the First Amendment) to the Original Premises. Pursuant to that certain Second Amendment to Lease dated as of March 26, 2003 (the "**Second Amendment**"), Landlord and Tenant amended the Original Lease (as amended by the First Amendment) to, among other things, (i) add the Basement Premises (as defined in the Second Amendment) to the Original Premises, and (ii) terminate the Original Lease (as modified by the First Amendment) with respect to the Expansion Space. The Original Lease, as amended by the First Amendment and the Second Amendment is hereinafter referred to as the "**Lease.**" Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

C. Landlord and Tenant desire, subject to the terms and conditions set forth herein, to amend the Lease to expand the size of the Original Premises by adding Suite 120 located on the first floor of the Building, consisting of approximately 2,874 rentable square feet, and more particularly shown on Exhibit A attached hereto (the "**Suite 120 Space**").

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **New Defined Terms**. The following new defined terms are hereby added on the first page of the Original Lease after the definition of "**Permitted Use**":

Suite 120 Space: That portion of the Project commonly known as Suite 120, containing approximately 2,874 rentable square feet, as determined by Landlord, as shown on Exhibit A to the Third Amendment.

Suite 120 Space Commencement Date: The earlier to occur of (a) January 1, 2004, or (b) the date upon which Landlord reasonably determines that the Wall Opening (as defined in the Third Amendment) has been completed.

Suite 120 Space Term: The period of time commencing on the Suite 120 Space Commencement Date and ending on June 30, 2004; provided, however, that if Tenant gives Landlord written notice of Tenant's desire to extend the Suite 120 Space Term prior to April 30, 2004 (the "**Suite 120 Extension Notice**"), the Suite 120 Space Term shall terminate on the last day of the Term.

Third Amendment: That certain Third Amendment to Lease dated as of November 12, 2003, by and between Landlord and Tenant.

2. **Premises**. The defined term "Premises" on page 1 of the Original Lease is deleted in its entirety and replaced with the following:

Premises: That portion of the Project, containing approximately 20,659 rentable square feet, as determined by Landlord, as shown on Exhibit A to the Original Lease, and that portion of the Project commonly known as Suite 70, containing approximately 700 rentable square feet, as determined by Landlord, as shown on Exhibit A to the Second Amendment, and, during the Suite 120 Space Term, the Suite 120 Space.

3. **Base Rent**. Commencing on the Suite 120 Space Commencement Date, in addition to paying Base Rent for the Premises as provided for in the Lease, Tenant shall be required to pay Base Rent for the Suite 120 Space in the amount of $4,178.17 per month during the Suite 120 Space Term. During the Suite 120 Space Term, the defined term "Base Rent" shall mean Base Rent for the Original Premises, Base Rent for the Basement Premises and Base Rent for the Suite 120 Space. Base Rent shall continue to be adjusted as provided for in Section 4 of the Original Lease.

4. **Operating Expenses**. Commencing on the Suite 120 Space Commencement Date, in addition to paying Operating Expenses for the Original Premises as provided for in the Original Lease, Tenant shall be required to pay Operating Expenses for the Suite 120 Space during the Suite 120 Space Term. Notwithstanding anything to the contrary contained in the second paragraph of Section 5 of the Original Lease, during the Suite 120 Space Term, "**Tenant's First Floor Operating Expenses**" shall equal 10,903 rentable square feet multiplied by the First Floor Operating Expense Rate.

5. **Delivery of Suite 120 Space**.

(a) Prior to the Suite 120 Space Commencement Date, Landlord shall, at its cost and expense, open a portion of the common wall between the first floor Premises existing on the date hereof (the "**Existing First Floor Premises**") and the Suite 120 Space such that an individual is reasonably able to move directly from the Existing First Floor Premises to the Suite 120 Space and directly back to the Existing First Floor Premises (the area so opened, the "**Wall Opening**"); provided, however, that Landlord shall have no obligation to install a door, door frame, hardware or otherwise mark the Wall Opening. Tenant understands that the work required to create the Wall Opening may adversely impact Tenant's use and occupancy of the Premises. Tenant agrees not to interfere with such work and to comply with any reasonable requirements imposed by Landlord in connection with such work. Tenant acknowledges and agrees that Landlord shall have no

liability to Tenant in connection with such work and that Tenant shall not be entitled to any rental abatement or offset in connection therewith.

(b) Landlord shall deliver the Suite 120 Space to Tenant on the Suite 120 Space Commencement Date on an absolute "as is" basis, and (i) Tenant shall accept the Suite 120 Space in its existing condition as of the Suite 120 Space Commencement Date, subject to all applicable Legal Requirements; (ii) Landlord shall have no obligation for any defects in the Suite 120 Space; and (iii) Tenant's taking possession of the Suite 120 Space shall be conclusive evidence that Tenant accepts the Suite 120 Space and that the Suite 120 Space was in good condition at the time possession was taken. Tenant agrees and acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of any or all of the Suite 120 Space, and/or the suitability of the Suite 120 Space for the conduct of Tenant's business, and Tenant waives any implied warranty that the Suite 120 Space is suitable for Tenant's intended purposes.

6. **Surrender of the Suite 120 Space**.

(a) Unless Tenant timely delivers the Suite 120 Space Extension Notice to Landlord, Tenant agrees voluntarily to surrender the Suite 120 Space on or before June 30, 2004 ("**Initial Termination Date**"), and in the condition which space is required under the Lease to be surrendered to Landlord at the expiration or earlier termination of the Term; provided, however, that, in addition to the foregoing, Tenant, at its sole cost and expense, and prior to the Initial Termination Date, shall reconstruct the wall in which the Wall Opening is located to the same condition as existed immediately prior to the creation of the Wall Opening, and otherwise in a manner satisfactory to Landlord.

(b) If Tenant timely delivers the Suite 120 Space Extension Notice to Landlord, then Tenant agrees voluntarily to surrender the Suite 120 Space on or before the last day of the Term ("**Extended Termination Date**"), and in the condition which space is required under the Lease to be surrendered to Landlord at the expiration or earlier termination of the Term.

(c) Landlord and Tenant each agree that the other is excused as of the Initial Termination Date or Extended Termination Date, as applicable, from any further obligations under the Lease with respect to the Suite 120 Space, excepting only such obligations under the Lease which are, by their terms, intended to survive a termination of the Lease, and as otherwise provided herein. In addition, nothing herein shall be deemed to limit or terminate any common law or statutory rights Landlord may have with respect to Tenant in connection with any Hazardous Materials, or for violations of any Legal Requirements. Nothing herein shall excuse Tenant from its obligations under the Lease with respect to the Suite 120 Space prior to the Initial Termination Date or Extended Termination Date, as applicable.

(d) In the event that Tenant fails to surrender the Suite 120 Space to Landlord in the time and manner required by this Section 6, the provisions of Section 8 of the Lease shall apply to the Suite 120 Space.

7. Miscellaneous.

(a) This Third Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This Third Amendment may be amended only by an agreement in writing, signed by the parties hereto.

(b) This Third Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

(c) This Third Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which when taken together shall constitute one and the same instrument. The signature page of any counterpart may be detached therefrom without impairing the legal effect of the signature(s) thereon provided such signature page is attached to any other counterpart identical thereto except having additional signature pages executed by other parties to this Third Amendment attached thereto.

(d) Landlord and Tenant each represent and warrant that it has not dealt with any broker, agent other person (collectively, "**Broker**") in connection with this transaction other GVA Kidder Mathews, and that no other Broker brought about this transaction. Landlord and Tenant each hereby agrees to indemnify and hold the other harmless from and against any claims by any other Broker claiming a commission or other form of compensation by virtue of having dealt with Landlord or Tenant, as applicable, with regard to this leasing transaction.

(e) Except as amended and/or modified by this Third Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Third Amendment. In the event of any conflict between the provisions of this Third Amendment and the provisions of the Lease, the provisions of this Third Amendment shall prevail. Whether or not specifically amended by this Third Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Third Amendment.

[Signatures are on the next page.]

IN WITNESS WHEREOF, the parties hereto have executed this Second Amendment as of the day and year first above written.

LANDLORD:

ALEXANDRIA REAL ESTATE EQUITIES, INC., a Maryland corporation

By: /s/ Joel S. Marcus
Its: Chief Executive Officer

TENANT:

XCYTE THERAPIES, INC.,
a Delaware corporation

By: /s/ Kathi L. Cordova
Its: Senior V.P. of Finance & Treasurer

Exhibit 10.32

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as **[*]**. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

LICENSE AND SUPPLY AGREEMENT

This License and Supply Agreement ("Agreement") is entered into as of October 15th, 1999 (the "Effective Date") by and between Xcyte Therapies, Inc., a Delaware corporation having a principal place of business at 2203 Airport Way South, Suite 300, Seattle, Washington 98134, United States ("Xcyte"), and Diaclone S.A., a French corporation having a principal place of business at 1 Boulevard Fleming, B.P. 1985 F-25020 Besancon Cedex, France ("Diaclone").

RECITALS

A. Diaclone has developed and owns the Licensed Materials (as defined below).

B. Xcyte desires to obtain, and Diaclone is willing to grant to Xcyte, an exclusive worldwide license to the Licensed Materials for the development and commercialization of Licensed Products (as defined below) within the Field (as defined below), upon the terms and subject to the conditions of this Agreement.

C. Xcyte desires to obtain form Diaclone, and Diaclone is willing to manufacture and sell to Xcyte, the Licensed Antibody for use upon the terms and subject to the conditions of this Agreement.

Xcyte and Diaclone hereby agree as follows:

AGREEMENT

1. **Definitions**

In addition to the terms defined elsewhere in this Agreement, the following terms, whenever capitalized in this Agreement, shall have the following meanings:

1.1 "Affiliate" shall mean, with respect to a party, any entity that controls, is controlled by, or is under common control of a party. For this purpose, control of an entity shall mean direct or indirect ownership of fifty percent (50%) or more of the voting interest in, or a fifty percent (50%) or greater interest in the equity of, such corporation or other business entity, or the maximum percentage allowed by law in the country of the controlled entity.

1.2 "Diaclone" shall mean Diaclone S.A., a French corporation, and its Affiliates.

1.3 "FDA" shall mean the U.S. Food and Drug Administration or any successor agency thereof.

1.4 "Field" shall mean all ex vivo uses for (a) therapeutic purposes and (b) research applications and purposes using or relating to the Licensed Antibody or the Licensed Product.

1.5 "Licensed Antibody" shall mean the **[*]** produced by the Licensed Cell Line, and any modifications thereof made by Xcyte or its sublicenses; provided, however, that in no event shall any antibody that is not derived from the Licensed Materials and has been made with the use of information or materials available in the public domain constitute a Licensed Antibody.

1.6 "Licensed Cell Line" shall mean the **[*]** cell line and all progeny, clones, derivatives and modifications thereof.

1.7 "Licensed Know-How" shall mean any and all technical information, processes, compositions, formulae, data, engineering, materials, reports, analyses, know-how, trade secrets and other subject matter owned and/or controlled by Diaclone that is necessary or useful for the development, manufacture and/or commercialization of Licensed Products in the Field.

1.8 "Licensed Materials" shall mean, collectively, the Licensed Antibody and the Licensed Cell Line.

1.9 "Licensed Product" shall mean beads coated with the Licensed Antibody and made with use of the Licensed Materials.

1.10 "Net Sales" shall mean the gross amounts actually received by Xcyte or its sublicensees from the sale of Licensed Products to Third Parties, less (i) normal and customary rebates, and cash, quantity, trade and other discounts, actually taken, (ii) sales, use, value added and/or other similar taxes or duties actually paid, (iii) packaging, handling fees and pre-paid shipping, freight and insurance, (iv) import and/or export duties actually paid, and (v) amounts allowed or credited due to returns and the like.

1.11 "Third Party" shall mean a party other than Xcyte, Diaclone or their respective Affiliates.

1.12 "Xcyte" shall mean Xcyte Therapies, Inc., a Delaware corporation, and its Affiliates.

2. **License**

2.1 Grant of License. Diaclone hereby grants to Xcyte a worldwide, exclusive license under the Licensed Materials and Licensed Know-How, with the right to grant and authorize sublicenses, to make, have made, import, have imported, use, offer for sale, sell and otherwise distribute Licensed Products, practice any method, process or procedure, or otherwise exploit, in each case, Licensed Materials and Licensed Know-How for use in the Field (the "License").

2.2 Transfer of Licensed Materials. Within ninety (90) days after the Effective Date, Diaclone shall transfer to Xcyte all proprietary technical data, methods and processes, and

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

other information (in electronic and hard copy formats) and data in the possession or control of Diaclone relating to the Licensed Materials. In addition, upon request by Xcyte, Diaclone shall transfer to Xcyte a viable culture of the cell bank for the Licensed Cell Line, and Xcyte agrees to only use such cell bank as contemplated by and in accordance with this Agreement.

2.3 Sublicensing. Xcyte may grant and authorize sublicenses within the scope of the License. Upon request by Diaclone, Xcyte shall provide Diaclone with a copy, subject to the confidentiality provisions of Section 13, of the relevant terms of any sublicense agreement necessary to determine the rights granted under any Licensed Materials and the Licensed Know-How and the amounts due to Diaclone hereunder.

2.4 Option to Expand Field. Subject to all of the terms and conditions of this Agreement, Xcyte shall have an option (the "Option"), exercisable at any time upon written notice to Diaclone, to expand the Field hereunder to include **[*]** using or relating to the Licensed Antibody or the Licensed Product (the "Expanded Field"). The exercise of the Option shall be subject to the payment by Xcyte of a license fee in the amount of **[*]** and any future royalty payments pursuant to Section 6.3 with respect to the Expanded Field. Upon exercise of the Option in accordance with this Section 2.4, without further action of the parties, the Field shall automatically be amended to include the Expanded Field.

2.5 Right of First Refusal. In the event that, prior to the exercise of the Option by Xcyte, Diaclone shall agree with a Third Party upon the terms and conditions of a proposed license to such Third Party that would license to any extent the Licensed Materials in the Expanded Field, Diaclone shall provide written notice to Xcyte setting forth such proposed terms and conditions (the "Notice"), and Xcyte shall have a right of first refusal (the "Right of First Refusal") to enter into an agreement with Diaclone on such terms and conditions. Thereafter, Xcyte shall have a period of thirty (30) days in which to exercise the Right of First Refusal by written notice to Diaclone, during which period Diaclone shall not enter into such license with such Third Party. Upon exercise of the Right of First Refusal by Xcyte, the parties shall negotiate in good faith to enter into agreement on such terms and conditions as soon as reasonably practicable. In the event that Xcyte does not exercise the Right of First Refusal within such thirty (30)-day period, Diaclone shall have a period of sixty (60) days in which to grant such license to such Third Party of the Licensed Materials within the Expanded Field on terms no more favorable to such Third Party than those set forth in the Notice. In the event that Diaclone does not enter into such an agreement during such sixty (60)-day period, Diaclone may not enter into such an agreement without sending a new or revised Notice and complying with the terms and conditions of this Section 2.5. Upon receipt of the Notice by Xcyte, the Option shall not be exercisable by Xcyte unless and until (a) Xcyte fails to exercise the Right of First Refusal, and (b) Diaclone does not enter into such an agreement with such Third Party within such sixty (60)-day period.

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

3. **Manufacture and Purchase of Licensed Antibody**

3.1 Manufacture

(a) Production. Diaclone agrees to produce and test the bulk Licensed Antibody at its facilities located at 1 boulevard Fleming, B.P. 1985 F-25020 Besangon Cedex, France ("Facilities") and to sell the Licensed Antibody to Xcyte upon the terms and subject to the conditions of this Agreement. Diaclone shall manufacture and sell the Licensed Antibody for and to Xcyte on an exclusive basis for all uses within the Field, and Diaclone shall not manufacture or sell the Licensed Antibody for or to any Third Party for any use or purpose within the Field. Except as set forth in Section 4, Xcyte shall purchase the Licensed Antibody from Diacline on an exclusive basis. All Licensed Antibody provided to Xcyte by Diaclone will be produced in accordance with the manufacturing procedures identified in Exhibit A attached hereto ("Production Protocol"), will meet the specifications identified in Exhibit B attached hereto ("Specifications") and will be manufactured in accordance with "Good Manufacturing Practices." Diaclone will qualify the Licensed Cell Line as described in Exhibit C attached hereto ("Licensed Cell Line Qualification") and comply with the process validation requirements described in Exhibit D attached hereto. Diaclone shall not use the Specifications or the Production Protocol in connection with the performance of services for any Third Party.

(b) Changes. Diaclone may not make any changes to the Production Protocol, Specifications, or Licensed Cell Line Qualification without the prior written approval of Xcyte, which approval will not be unreasonably withheld. Diaclone will, however, agree to any such changes as are reasonably requested by Xcyte. Diaclone will have in place a documentation, control and change system that complies with Good Manufacturing Practices and other applicable rules, regulations and standards of the FDA, as well as any other applicable regulatory standards for the intended use of the Licensed Antibody, as such requirements may change from time to time ("Regulatory Standards"), and all changes made under this Section will conform to such Regulatory Standards. Any such changes will be made in writing and signed by authorized representatives of each party.

(c) Initial Quantity. Diaclone shall manufacture for Xcyte an initial quantity of **[*]** of purified bulk Licensed Antibody (the "Initial Quantity").

3 .2 Purchase and Supply

(a) Amount. No later than , 1999, Diaclone will provide to Xcyte the Initial Quantity. Thereafter, Xcyte may, in its sole and absolute discretion, order additional purified bulk Licensed Antibody in amounts in excess of the Initial Quantity ("Additional Licensed Antibody") as set forth in Section 3.2(b). If Xcyte orders Additional Licensed Antibody, Diaclone will produce, sell and deliver such Additional Licensed Antibody to Xcyte in accordance with the terms of this Agreement upon delivery dates that are reasonable and mutually agreed to by the parties. Xcyte will be obligated to purchase such Additional Licensed Antibody.

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(b) Order Procedure. Xcyte will order Licensed Antibody under this Agreement by executing and issuing to Diaclone a purchase order ("Purchase Order") which will specify the reasonable amount of Licensed Antibody ordered, reasonable delivery dates, place of delivery, pricing pursuant to Section 6.1 and any other additional terms agreed to by the parties. Each such Purchase Order will be automatically binding upon and enforceable against Diaclone upon delivery by Xcyte if in material conformity with the Specifications and the terms and conditions of this Agreement. In all other cases, a Purchase Order will be binding upon Diaclone upon (x) written acceptance by Diaclone or (y) the failure by Diaclone to object to such Purchase Order (including objection to the specified delivery dates, which shall be reasonable and mutually agreed by the parties, as set forth in Section 3.2(a)) in writing within fifteen (15) days of receipt thereof. A Purchase Order may not be amended except by a written amendment executed according to Section 13.3. Diaclone will notify Xcyte immediately if it determines that it will not be able to meet any of the terms of a Purchase Order, including, but not limited to, delivery dates. In addition, Diaclone will notify Xcyte promptly of any supply constraints (e.g., materials, third party contracts, facilities or capacity) of which it becomes aware that may affect its ability to supply the Licensed Antibody in accordance with the terms of any Purchase Order. No such notification by Diaclone or acknowledgment of such notification by Xcyte will relieve Diaclone of any liability for a breach of this Agreement or a Purchase Order.

3.3 Production Materials. As set forth in Section 6.1(d), Xcyte shall reimburse Diaclone for the purchase of certain materials to be used by Diaclone in the manufacture and production of the Licensed Antibody for Xcyte hereunder (the "Production Materials"); provided, however, that Diaclone shall not use any Production Materials for any purpose other than the manufacture and production of the Licensed Antibody for Xcyte pursuant to this Agreement, and Diaclone agrees, upon Xcyte's request and at Xcyte's expense, to deliver the Production Materials to Xcyte following any termination or expiration of this Agreement. The Production Materials and their respective estimated costs are set forth on Exhibit E attached hereto.

3.4 Biosafety Testing. Diaclone agrees to conduct, at Xcyte's expense, biosafety testing (the "Biosafety Testing") on all Licensed Antibody to be provided to Xcyte hereunder and under any Purchase Order. The specifications of the tests included in the Biosafety Testing, and the estimated costs therefor, are set forth in Exhibit F attached hereto. Diaclone shall provide to Xcyte all data, results and materials relating to the Biosafety Testing.

3.5 Status Conferences. Diaclone will, at the request of Xcyte, meet by telephone or otherwise to discuss with Xcyte the status of any Licensed Antibody ordered by Xcyte and not yet delivered by Diaclone.

3.6 Back-up Cell Bank; Segregation of Licensed Antibody. Diaclone will at all times have a back-up master cell bank for the Licensed Cell Line (minimum of five (5) vials) stored at some location other than the Facilities to minimize any risk of loss that could threaten the master cell bank located at the Facilities. If requested by Xcyte, Diaclone will, subject to space and storage limitations, segregate Licensed Antibody, including, but not limited to, the Initial Quantity, upon completion of manufacture thereof until shipment.

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

3.7 **[*]** Equipment and Materials. Any tooling, test equipment or other equipment or material **[*]** for purposes of performing its obligations hereunder **[*]** will remain at all times **[*]** such equipment or material (a) may not **[*]** without Xcyte's prior written consent, (b) may be used only for the purpose of producing the Licensed Antibody or other products produced by Diaclone for Xcyte as agreed by the parties and (c) **[*]** all subject to Xcyte's instructions. Diaclone will reimburse Xcyte **[*]**. All such equipment and material will be included, to the extent applicable, in Diaclone' calibration and document control programs, subject to Xcyte's prior written authorization.

3.8 Ownership of Licensed Antibody. The parties acknowledge and agree that Xcyte is the sole owner of all Licensed Antibody provided to Xcyte by Diaclone pursuant to this Agreement. Diaclone agrees to take any action deemed by Xcyte to be necessary or appropriate to vest such ownership position in Xcyte and to transfer and assign all right, title and interest held by Diaclone in such Licensed Antibody to Xcyte.

4. **Third Party Supply.**

4.1 Failure to Supply. If (a) Diaclone materially fails to comply with the Regulatory Standards for a period of six (6) months or some lesser time as reasonably determined by Xcyte based on the severity of the violation, (b) Diaclone cannot (or does not wish to) produce Licensed Antibody of the quality, in the quantity or within the time frame reasonably required by Xcyte (with the applicable time frame being within thirty (30) days of the delivery date specified in the applicable Purchase Order, or within ninety (90) days in the case of a force majeure event as described in Section 11, provided that Diaclone is in compliance with the provisions of Section 11), (c) Diaclone either does not have or loses the right to use any of the technology required to produce and test the Licensed Antibody in accordance with the Specifications, the Production Protocol and any other specifications agreed upon by the parties, including, without limitation, use of viral inactivation technology acceptable to Xcyte and in compliance with the Regulatory Standards, or (d) one or more parties (other than parties that currently have an ownership interest in Diaclone) obtains the ability, through on ownership interest in the capital stock or assets of Diaclone or by other means, to influence existing or future terms of this Agreement or Diaclone's performance hereunder, then Xcyte may, in addition to all other remedies it may have under this Agreement or otherwise, at its sole option, elect to have one or more Third Parties manufacture and supply the Licensed Antibody and/or produce the Licensed Antibody itself.

4.2 Phase III Clinical Trials. At such time as Xcyte is preparing for the commencement of Phase III Clinical Trials relating to the Licensed Materials or Licensed Product, Xcyte may, at its sole option, elect to have one or more Third Parties manufacture and supply the Licensed Antibody and/or produce the Licensed Antibody itself.

4.3 Assistance. In the event that Xcyte shall elect to have one or more Third Parties manufacture and supply the Licensed Antibody and/or produce the Licensed Antibody itself pursuant to Section 4.1 or Section 4.2, Diaclone shall, upon Xcyte's request, promptly

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

transfer a minimum of five (5) vials of the master cell bank for the Licensed Cell Line to Xcyte or any such Third Party. In addition, Diaclone shall provide to Xcyte and/or any such Third Party all necessary information and cooperation to enable Xcyte or such Third Party to manufacture the Licensed Antibody in accordance with the Specifications and the Production Protocol. If requested by Xcyte, Diaclone will assist Xcyte in locating an appropriate Third Party manufacturer to produce the Licensed Antibody.

5. **Quality Control, Legal, Regulatory Standards**

5.1 **[*]** Testing. Diaclone will perform **[*]** supplied to Xcyte hereunder in accordance with Diaclone's standard operating procedures as approved by Xcyte. **[*]**

5.2 Compliance with Law and Regulation. Diaclone will comply with all international, national, state and local laws, ordinances, rules and regulations applicable to the conduct of its business, including, but not limited to, the Regulatory Standards, in performing its obligations hereunder and will maintain, during the term of this Agreement, a manufacturing facility, personnel and quality control and quality assurance programs that comply with the Regulatory Standards. In the event that regulatory certification is required for the manufacture, sale or distribution of Licensed Materials, Diaclone will ensure that such certification is met at its own expense.

5.3 Contacts with Regulatory Bodies. Diaclone will advise Xcyte of all contacts with any regulatory agency concerning the Licensed Antibody and, upon request, will provide Xcyte with copies of all materials regarding the Licensed Antibody that it submits to any regulatory agency or that are provided by any regulatory agency to Diaclone.

5.4 Quality Systems Review. Since the Licensed Antibody is considered by Xcyte to impact the performance, safety or efficacy of an Xcyte product, Diaclone will be subject to qualification activities including verbal or written surveys or on site quality system audits. Xcyte will have reasonable access at reasonable times during normal business hours, subject to the parties' mutual agreement, to visit Diaclone's facilities for the purpose of inspecting Diaclone's testing and manufacturing processes or reviewing any documents relating to the Licensed Antibody. Access for such purposes will not be unreasonably withheld, Further, the Licensed Antibody will be incorporated into products which will be subject to inspection by applicable regulatory authorities (including the FDA). Diaclone hereby agrees that such inspections will be permitted, that Xcyte may, at its option, be present at the Facilities for such inspections and that Diaclone will provide documents relating to the Licensed Antibody as requested by such regulatory authorities. Further, Diaclone shall advise Xcyte immediately if Diaclone receives notice of an impending inspection or if an authorized agent of the FDA or other governmental agency visits the Facilities concerning the Licensed Materials. Diaclone shall furnish to Xcyte any report including any FDA Form 483 notices (or comparable notices of other agencies), regulatory letters or similar documents received from such agency and the application of such report to the Licensed Materials, if any, within seven (7) days of Diaclone's receipt of such report.

5.5 Records Retention. All records relating to the manufacture of the Licensed Antibody and the fulfillment of each Purchase Order, including all Lot History Records, will be retained for a period of at least five (5) years from the date of manufacture. Prior to the destruction of any such records, written notice will be provided to Xcyte, and Xcyte will have the right to request and retain them.

5.6 Changes to Facilities. Diaclone will notify Xcyte in writing not less than ninety (90) days prior to making any change in the Facilities if, as a result of such change, the Licensed Antibody would fail to meet the Specifications or Diaclone would be in violation of Regulatory Standards. No such change will be made by Diaclone without Xcyte's prior written approval, which approval may be granted or withheld in Xcyte's sole discretion.

5.7 Product Recall. Xcyte and Diaclone each will notify the other promptly if the Licensed Antibody or a Licensed Product alleged or proven to be the subject of a recall, market withdrawal or correction and the parties will cooperate in the handling and disposition of any such recall, market withdrawal or correction; provided, however, that in the event of a disagreement as to any matter related to such recall, market withdrawal or correction, Xcyte will have final authority.

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

5.8 Cooperation Regarding Regulatory Approval. Diaclone will provide to Xcyte access to its regulatory submissions, clinical samples, and any necessary reference testing material to the extent necessary to facilitate any FDA or other regulatory body submissions undertaken by Xcyte and will, no later than December 1, 1999, or at such other time or times as may be requested by Xcyte, provide to Xcyte all cooperation, information and materials that may be reasonably requested by Xcyte in connection with any IND or similar filing or filings undertaken by Xcyte. Additionally, Diaclone agrees to provide Xcyte with any assistance reasonably requested by Xcyte in obtaining such governmental approvals, including, without limitation, the furnishing of all technical information, processes, formulae, data, engineering, materials, know-how and trade secrets owned or controlled by Diaclone that are relevant to the development and manufacture of the Licensed Materials available to Diaclone and its Affiliates.

6. **Supply Pricing; Licensee Fee; Royalties**

6.1 Supply Pricing.

(a) Price Per Gram. Subject to the provisions of this Section 6.1, the price to be paid for purchase of Licensed Antibody during the term of this Agreement shall be **[*]** per gram of Licensed Antibody.

(b) Initial Quantity. Xcyte shall pay to Diaclone **[*]** within thirty (30) days of acceptance by Xcyte of the Initial Quantity. Such payments shall be non-refundable, except as set forth in Section 8.1(c).

(c) Production Materials. Xcyte shall reimburse Diaclone for all purchases of Production Materials by Diaclone that are approved in writing in advance by Xcyte (provided that Xcyte shall also approve the price of such Production Materials in the event that the price therefor materially differs from the price set forth on Exhibit E attached hereto) within forty-five (45) days of receipt of an undisputed invoice with respect thereto from Diaclone.

(d) Biosafety Testing. Diaclone shall conduct and pay for the Biosafety Testing in accordance with Exhibit F attached hereto (provided that Xcyte shall pre-approve any costs that materially differ from the estimated costs set forth in Exhibit F attached hereto) and invoice Xcyte for reimbursement. Xcyte shall pay all undisputed amounts on such invoice within forty-five (45) days of receipt thereof.

(e) Cell Banks. Within forty-five (45) days of receipt of an invoice from Diaclone with respect thereto, Xcyte **[*]** The parties acknowledge and agree that Xcyte **[*]** the parties anticipate that the remainder of such costs will be an additional amount of approximately **[*]**

(f) Invoicing for Licensed Antibody. Diaclone will invoice Xcyte, in duplicate, accompanied (if applicable) by a bill of lading or airway bill, for all Licensed Antibody purchased hereunder promptly upon delivery of such Licensed Antibody pursuant to Section 8. The price per gram set forth in Section 6.1(a) is inclusive of all costs payable by Xcyte for purchase of the Licensed Antibody. Xcyte will, under no circumstances, be responsible for any costs in addition to such amounts, including, without limitation, costs for activities performed by Biotest AG or any other Affiliate of Diaclone. Diaclone will indemnify Xcyte for any such additional costs.

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

6.2 License Fee. In consideration of the License, Xcyte shall pay the following fees to Diaclone at the following times: **[*]** within six (6) months of the receipt by Diaclone of the payment set forth in the preceding clause (b).

6.3 Royalties

(a) Royalties on Net Sales. Subject to the other provisions of this Section 6.3, Xcyte shall pay to Diaclone, on a product-by-product basis, a royalty **[*]** of Net Sales. Following the first approval by the FDA or its foreign equivalent of a Licensed Product for therapeutic uses, the amount payable to Diaclone by Xcyte under this Section 6.3 for all Licensed Products used for therapeutic uses shall be, at a minimum, **[*]** By way of clarification, such minimum annual amounts shall not be reduced in any manner by the provisions of Sections 6.3(b) or 6.3(c) below.

(b) Combination Products. In the event that a Licensed Product is used or sold by Xcyte in combination as a single product with one or more other product(s) or service(s) which are not Licensed Products, Net Sales from such sales and/or use for purposes of calculating the amounts due under Section 6.3(a) above shall be calculated by multiplying the Net Sales of that combination by the fraction A/(A + B), where A is the gross selling price of then Licensed Product sold separately and B is the gross selling price of the other product or service sold separately. In the event that no such separate sales or use are made by Xcyte, Net Sales for royalty determination shall be as reasonably allocated by Xcyte between such Licensed Product and such other product or service, based upon their relative importance and proprietary protection. It is understood and agreed that Xcyte intends to use Licensed Products in connection with products and services which do not entail the use of the Licensed Materials, and that such Licensed Products shall be subject to this Section 6.3(b).

(c) Third Party Offsets. In the event that Xcyte enters into any license or other agreement with a third party with respect to intellectual property or inputs protected by intellectual property which is necessary or useful for the manufacture, use or sale of a Licensed Product, Xcyte may offset any amounts paid to such third party thereunder against royalties otherwise due Diaclone pursuant to this Section 6.3; provided, however, that the royalties that would otherwise be due to Diaclone may not be reduced by more than **[*]**

(d) One Royalty. For purposes of clarity, the parties acknowledge and agree that no more than one royalty payment shall be due with respect to a sale of a particular Licensed Product. In addition, no royalty shall be payable under this Section 6.3 with respect to Licensed Products distributed for use in research and/or development, in clinical trials or as promotional samples.

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

7. **Payment; Reports and Records**

7.1 Timing of Royalty Payments; Payment Method. Xcyte agrees to pay all royalties due to Diaclone within sixty (60) days of the last day of the calendar quarter in which such royalties accrue.

7.2 Royalty Reports. Xcyte shall deliver to Diaclone within ninety (90) days after the end of each calendar quarter in which Licensed Products are sold a report setting forth in reasonable detail the calculation of the royalties payable to Diaclone for such calendar quarter, including the Licensed Products sold in each country, the Net Sales thereof, and all amounts received from sublicensees for sales of Licensed Products. Such reports shall be Confidential Information of Xcyte subject to Section 13.

7.3 Currency; Foreign Payments. All payments due hereunder shall be paid in United States dollars. If any currency conversion shall be required in connection with the payment of any royalties hereunder, such conversion shall be made by using the exchange rate for the purchase of U.S. Dollars reported by the Bank of America on the last business day of the calendar quarter to which such royalty payments relate. If at any time legal restrictions prevent the prompt remittance of any royalties owed with respect to Net Sales in any jurisdiction, Xcyte may notify Diaclone and make such payments by depositing the amount thereof in local currency in a bank account or other depository in such country in the name of Diaclone, and Xcyte shall have no further obligations under this Agreement with respect thereto.

7.4 Inspection of Books and Records. Xcyte shall maintain accurate books and records which enable the calculation of royalties payable hereunder to be verified. Xcyte shall retain the books and records for each quarterly period for three (3) years after the submission of the corresponding report under Section 7.2. Upon thirty (30) days prior notice to Xcyte, independent accountants selected by Diaclone and reasonably acceptable to Xcyte, after entering into a confidentiality agreement with Xcyte, may have access to Xcyte's books and records to conduct a review or audit once per calendar year, for the sole purpose of verifying the accuracy of Xcyte's payments and compliance with this Agreement. The accounting firm shall report to Diaclone only whether there has been a royalty underpayment and, if so, the amount thereof. Such access shall be permitted during Xcyte's normal business hours during the term of this Agreement and for two (2) years after the expiration or termination of this Agreement. Any such inspection or audit shall be at Diaclone' expense; provided, however, that in the event that an inspection reveals an underpayment of ten percent (10%) or more in any audit period, Xcyte shall pay the costs of such inspection and promptly pay to Diaclone any underpayment.

7.5 Taxes. All royalty amounts required to be paid to Diaclone pursuant to this Agreement may be paid with deduction for withholding for or on account of any taxes (other than taxes imposed on or measured by net income) or similar government charge imposed by a jurisdiction other than the United States ("Withholding Taxes"). At Diaclone's request, Xcyte shall provide Diaclone a certificate evidencing payment of any Withholding Taxes hereunder and shall reasonably assist Diaclone to obtain the benefit of any applicable tax treaty.

7.6 Payment. The prices stated in the Pricing Schedule and referenced in each Purchase Order are stated in United States Dollars, and do not include sales, use, excise or any other similar taxes imposed by international, federal, state or local governments, or shipping charges. Such prices are inclusive of handling and all other charges unless otherwise specifically provided in the Pricing Schedule or Purchase Order. Taxes and shipping charges will be itemized separately in each invoice. Unless otherwise provided in the Purchase Order, terms of payment will be net forty-five (45) days from Xcyte's receipt of the Licensed Antibody or invoice, whichever occurs later, subject to Xcyte's acceptance of the Licensed Antibody and the resolution of any good faith disputes relating to the invoiced amount. No payment of an invoice will be deemed to constitute acceptance of the Licensed Antibody by Xcyte. If Xcyte disputes any invoice, Xcyte will, within forty-five (45) days of receipt of such invoice, notify Diaclone that it disputes the accuracy or appropriateness of such invoice and provide the basis for such dispute.

8. **Delivery; Acceptance**

8.1 Documentation, Inspection

(a) Documentation. With each shipment of Licensed Antibody to Xcyte under this Agreement or any Purchase Order, Diaclone will send a copy of the lot history record, **[*]** In addition, Diaclone will provide a material safety data sheet for the Licensed Antibody and any other documentation required by the Specifications or requested by Xcyte. Any substitution, reprocessing or reworking of the Licensed Antibody must be reported to and approved by Xcyte before any Licensed Antibody subject to such variances may be shipped. Any substituted, reprocessed or reworked Licensed Antibody must be accompanied by variance and nonconformance data in addition to the documentation described above.

(b) Acceptance and Rejection All Licensed Antibody delivered under this Agreement will be inspected and tested by Xcyte or its designee using Xcyte's standard testing procedures. Xcyte will give notice by facsimile of its rejection or acceptance of any Licensed Antibody within sixty (60) days of receipt thereof.

(c) Non-Conformance. Notwithstanding the completion of such inspection or the passing of the date for notice of rejection under Section 8.1 (b), if any Licensed Antibody is found at any time by Xcyte, or its customers or users of the Licensed Antibody or a Xcyte product in which the Licensed Antibody was incorporated, to be defective or not in conformity with the Specifications, or if Xcyte is not satisfied with the results of the Biosafety Testing, Xcyte may, at its option: (i) reject such Licensed Antibody, require Diaclone to replace such Licensed Antibody at Diaclone's expense (other than costs of Biosafety Testing and Production Materials which shall be borne by Xcyte in accordance with Sections 3.3 and 3.4) and provide notice to Xcyte that any Licensed Antibody delivered is replacement Licensed Antibody, provided that if Diaclone is unable to replace such Licensed Antibody within the time period specified in Section 4.1, or such other time period as may be agreed by the parties, then Xcyte may exercise its option for the manufacturing rights set forth in Section 4, or (ii) notwithstanding anything to the

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

contrary in this Agreement, request a refund of all amounts paid to Diaclone hereunder in connection withsuch Licensed Antibody (other than payments made with respect to Biosafety Testing and **[*]** in accordance with Sections 3.3 and 3.4), in which case Diaclone will promptly refund such amounts; provided, however, that Diaclone shall be entitled to retain **[*]** with respect to each **[*]** of such Licensed Antibody if such Licensed Antibody is not defective.

8.2 Shipping and Delivery

(a) Shipping. Unless otherwise specified in the Purchase Order, all freight expenses for delivery of the Licensed Antibody will be prepaid by Diaclone and added to Diaclone's invoice to Xcyte for payment by Xcyte. Xcyte will obtain permits for importation of the Licensed Antibody into the United States and other countries as appropriate. No Licensed Antibody may be shipped to Xcyte's designated destination until the appropriate import permits have been obtained, and Diaclone shall assist Xcyte, upon request of Xcyte, in obtaining approvals of regulatory agencies in the applicable jurisdictions for importation of the Licensed Antibody. Diaclone shall be responsible for exporting the Licensed Antibody from France or such other location in which Diaclone may manufacture the Licensed Antibody in accordance with this Agreement and shall obtain any necessary export licenses or approvals required for such export.

(b) Delivery. Unless otherwise specified in the Purchase Order, the FOB point will be the location designated by Xcyte in the Purchase Order for delivery of the Licensed Antibody. Diaclone will bear all risk of loss or damages to the Licensed Antibody, and title to the Licensed Antibody will not transfer to Xcyte until delivery of the Licensed Antibody (including any Licensed Antibody segregated in accordance with Section 3.6 prior to shipment) to Xcyte's designated location.

9. **Representations and Warranties**. In addition to all other express or implied warranties, Diaclone represents and warrants that it has the right (a) to use all technology it employs in the production, use and sale of the Licensed Antibody hereunder, (b) to grant all licenses granted or to be granted hereunder and (c) to perform all of its other obligations under this Agreement. Diaclone further represents and warrants that its Facilities will be maintained as required herein and that the Licensed Antibody (i) will meet the Specifications, (ii) will be manufactured in accordance with the Production Protocol and "Good Manufacturing Practices," (iii) will be free from all liens and security interests such that full ownership rights vest in Xcyte, and (iv) has been developed, labeled, packaged, manufactured, tested, stored, supplied and sold in accordance with the terms of this Agreement and the Regulatory Standards Diaclone represents and warrants that (A) the execution, delivery and performance of this Agreement does not conflict with, violate or breach any agreement to which Diaclone is a party (B) Diaclone has not received written notice that the Licensed Materials infringe upon the intellectual property rights of any third party, (C) there are no threatened or pending actions, suits, investigations, claims or proceedings in any way relating to the Licensed Materials to which Diaclone is a party or of which Diaclone is aware, and (D) it is the exclusive owner of all right, title and interest in the Licensed Materials.

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

10. **Term and Termination**

10.1 Term. The initial term of this Agreement will begin on the Effective Date and will continue, subject to early termination as provided in Section 7.2, a period of seven (7) years.

10.2 Termination. This Agreement may be terminated as follows:

(a) Xcyte may terminate this Agreement at any time upon thirty (30) days written notice to Diaclone;

(b) Either party may terminate this Agreement in the event of a material breach by the other party provided that the defaulting party fails to cure such breach within thirty (30) days after receipt of notice of such breach, or in the case of a breach that is not capable of cure within thirty (30) days, if the defaulting party fails to begin cure within thirty (30) days after receipt of notice of such breach or to continue to pursue such cure diligently thereafter;

(c) Either party may terminate in the event of (i) the making by either party of any general assignment for the benefit of creditors, (ii) the filing by or against either party of a petition for reorganization or arrangement under any law relating to bankruptcy (unless, in the case of a petition filed against such party, the same is dismissed within sixty (60) days), (iii) the appointment if a trustee or receiver to take possession of substantially all of either party's assets, where possession is not restored to such party within sixty (60) days, or (iv) the attachment, execution or other judicial seizure of substantially all of either party's assets, where such seizure is not discharged within sixty (60) days; or

(d) This Agreement may be terminated as set forth in Section 8.3.

10.3 Effect of Termination. Neither party will be relieved of any obligations incurred under this Agreement prior to the date of such termination or expiration by the termination or expiration thereof, and the provisions of Sections 1, 2.1, 3.6, 3.8, 4, 5.8, 7.4, 9, 10, 12, 13, 14, 15 and 16 will survive any such termination or expiration.

11. **Force Majeure**

11.1 No Liability. Neither party will be liable for any failure to fulfill any term or condition of this Agreement, other than the payment of amounts owed hereunder, nor will such failure constitute a breach of or default under this Agreement, if fulfillment has been delayed, hindered or prevented by an event of force majeure, including any war, riot, strike, acts of the elements, acts or compliance with any order of any government or agency thereof (including the enactment of any new laws, rules or regulations), sabotage or industrial accident, where the failure to perform is beyond the reasonable control and not caused by the negligence or intentional misconduct of the non-performing party, and the non-performing party has exerted all reasonable efforts to avoid or remedy the force majeure.

11.2 Notice of Force Majeure. Promptly following the date any event of force majeure occurs, the party so affected will advise the other party in writing of the date and nature

of the event and the period of time such event is expected to continue. During the existence of such event, the duties and obligations of the parties under this Agreement will be suspended and the parties will take all reasonable action to ensure resumption of normal performance under this Agreement as soon as possible.

11.3 Termination Right. If, as a result of any such force majeure event, a party is unable to fully perform its obligations hereunder for a period of ninety (90) days, the other party will have the right to terminate this Agreement upon written notice, effective the date of such notice.

12. **Indemnification; Limitation of Liability**

12.1 By Diaclone. Diaclone will defend, indemnify and hold harmless Xcyte and its officers, directors, employees and agents (collectively, "Indemnitee") from and against any and all losses, damages, liability, settlement costs, defense costs, other expenses and attorneys' fees (a "Liability") resulting from a Third Party claim or suit related to or arising out of the development, labeling, packaging, manufacturing, storage, testing, or supply of Licensed Antibody or any breach of this Agreement by Diaclone, including, without limitation, breach of any representation or warranty contained herein.

12.2 By Xcyte. Xcyte shall defend, indemnify and hold harmless Diaclone and its officers, directors, employees and agents (collectively, "Indemnitee") from and against any and all Liabilities resulting from a Third Party claim or suit relating to or arising out of the development, labeling, packaging, manufacturing, storage, testing or sale of any Licensed Product by Xcyte or any breach of this Agreement by Xcyte, including, without limitation, breach of any representation or warranty contained herein.

12.3 Procedure. In the event that any Indemnitee intends to claim indemnification under this Section 12 it shall promptly notify the indemnifying party in writing of such alleged Liability. The indemnifying party shall have the right to control the defense and settlement thereof. The Indemnities shall cooperate with the indemnifying party and its legal representatives in the investigation of any action, claim or liability covered by this Section 12. The Indemnitee shall not, except at its own cost, voluntarily make any payment or incur any expense with respect to any claim or suit without the prior written consent of the indemnifying party, which the indemnifying party shall not be required to give.

12.4 LIMITATION OF LIABILITY. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES ARISING OUT OF THIS AGREEMENT, HOWEVER CAUSED, UNDER ANY THEORY OF LIABILITY.

13. **Confidentiality**

13.1 Confidential Information. "Confidential Information" will include, but not be limited to, any information marked as confidential and all know-how, formulas, specifications, processes, product ideas, inventions and technical, business and financial plans, forecasts and strategies, and any information derived therefrom disclosed by either party to the other. Each party will hold in confidence and not use or disclose to others, except as specifically authorized by this Agreement, the Confidential Information of the other. Each party will protect the other party's Confidential Information by using the same degree of care, but not less than a reasonable degree of care, used to protect its own Confidential Information. Diaclone acknowledges that the Specifications, the Production Protocol, the quantity of the Licensed Antibody ordered or used by Xcyte and the quantity of Xcyte's product sold by Xcyte are Confidential Information of Xcyte.

This restriction does not apply to the extent it can be established by the receiving party that the information:

(a) was known to the receiving party at the time of disclosure;

(b) was part of the public domain at the time of disclosure or later entered the public domain through no fault of the receiving party;

(c) was made known to the receiving party from another source under no obligation to the disclosing party; or

(d) was independently developed by the receiving party without the use of the disclosing party's Confidential Information.

Notwithstanding the above, each party may disclose the other party's Confidential Information: (i) to employees or agents to the extent necessary to accomplish the purposes of this Agreement, provided that each such individual is first bound by an obligation of confidentiality equivalent to that described herein, (ii) to the extent necessary to comply with applicable laws, judicial orders or governmental regulations provided that each party agrees to give reasonable advance notice to the other of any such intended disclosure, and to minimize such disclosure to the extent possible, and (iii) to governmental agencies to obtain approval for commercial sale of the Licensed Antibody or any of Xcyte's products. Each party's Confidential Information will remain the property of that party, and the disclosure of Confidential Information hereunder does not constitute a grant of any right or license to such Information. The restrictions described in this Section 13 will remain in effect for five (5) years after termination of this Agreement.

13.2 Test Results. Diaclone specifically agrees that the results of any tests performed on the Licensed Cell Line or Licensed Antibody that are paid for by Xcyte belong solely to Xcyte, are part of Xcyte's Confidential Information and are subject to the protections described in this section. Diaclone further agrees that such information will not be used by Diaclone for any purpose other than to produce Licensed Antibody for Xcyte as described in this Agreement, or be used by or for the benefit of any third party without Xcyte prior consent.

13.3 Equitable Relief. The parties agree that due to the unique nature of the Confidential Information, there can be no adequate remedy at law for any breach of the receiving party's obligations under this Agreement, thereby resulting in irreparable harm to the disclosing party. Therefore, notwithstanding Section 16.6 hereof, upon any such breach of this Section 13 or any threat thereof, the disclosing party shall be entitled to seek appropriate mandatory or negative injunctive relief.

14. **Intellectual Property**.

14.1 Reservation of Rights. For purposes of this Section 14, "Intellectual Property" will mean all intellectual property, tangible or intangible including, without limitation, any and all data, techniques, inventions, discoveries, ideas, processes, know-how, patents, patent applications, trade secrets, and other proprietary information. Except as expressly stated herein, neither party grants any right or license to any of its Intellectual Property to the other party, and the disclosure of Confidential Information by either party to the other will not obligate the disclosing party to grant rights in or to the subject matter of such Confidential Information to the receiving party.

14.2 Ownership. All Intellectual Property pertaining to the development, manufacture or use of the Licensed Materials will be owned by the inventor as determined under United States patent law. Any such Intellectual Property which is invented jointly by the parties ("Joint Intellectual Property") will be jointly owned by the parties. All patent applications on the Joint Intellectual Property will be agreed to by each of the parties and filed, prosecuted and maintained jointly by the parties at their joint expense. Any such Joint Intellectual Property may be used (or sublicensed) by either Diaclone or Xcyte worldwide for any purpose without accounting to the other. If for any reason Diaclone or Xcyte declines to participate in the filing, prosecution, or maintenance of any patent application or patent on the Joint Intellectual Property, (other than Joint Intellectual Property governed by Section 14.3), the other party will be entitled to assume responsibility for such activities at its sole expense, and such patent application or patent will become the sole property of such party.

14.3 Assignment. Notwithstanding the above, any Intellectual Property developed by Diaclone at Xcyte's expense will belong solely to Xcyte regardless of whether it would otherwise have been solely or jointly owned by Diaclone, and Diaclone will take any action necessary to confirm Xcyte's ownership of and assign all such Intellectual Property to Xcyte upon Xcyte's request. Xcyte will have the exclusive right to apply for or register patents and other proprietary protections in such assigned Intellectual Property and Diaclone agrees to execute such documents, render such assistance and take such other action as Xcyte may reasonably request, at Xcyte's expense, to apply for, register, perfect, confirm and protect Xcyte's rights therein.

15. **Communications and Notices.** All, notices hereunder will be in wiriting and will be deemed given if delivered personally or by facsimile transmission (receipt verified), telexed, or sent by express courier service to the parties at the following addresses (or to such other address as specified by either party):

If to Xcyte, addressed to:	Xcyte Therapies, Inc. 2203 Airport Way South, Suite 300 Seattle, Washington 98134 United States Attn: Business Development Fax: (206) 328-7316
With a copy to:	Venture Law Group 4750 Carillon Point Kirkland, Washington 98033 United States Attn: William W. Ericson Fax: (425) 739-8750
If to Diaclone:	Diaclone, S.A. 1 boulevard Fleming, B.P. 1985 F-25020 Besancon Cedex France Attn: Dr. John Wijdenes Fax:_____

16. **Miscellaneous**.

16.1 Assignment. This Agreement is binding on successors and assigns of the parties provided that this Agreement may not be assigned to a third party without the prior written consent of the other party, which consent will not be unreasonably withheld; provided, however, that Xcyte may assign this Agreement to an acquiror of all or substantially all of its assets or the resulting entity in a merger or consolidation, or in connection with any other transaction resulting in the transfer of at least fifty percent (50%) of its voting power, without the consent of Diaclone.

16.2 Entire Agreement. This Agreement, including the Exhibits, Purchase Orders and, where applicable, Xcyte's Purchasing Standard Terms and Conditions ("Ts & Cs"), constitutes the entire Agreement between the parties regarding this subject matter and supersedes all such prior understandings between the parties. Any amendment to this Agreement must be in writing and signed by an authorized representative of each party. If there is any conflict between the terms of this Agreement and the Ts & Cs or a Purchase Order, the terms of this Agreement will prevail. If there is any conflict between the Ts & Cs and a Purchase Order, the Purchase Order will prevail.

16.3 Independent Contractor. Diaclone will be an independent contractor and not an agent, partner or co-venturer of Xcyte. Neither party will have the authority to bind the other by contract or otherwise. This Agreement will not be deemed or construed as creating a partnership between Diaclone and Xcyte for any purpose.

16.4 Attorney's Fees. The prevailing party in any lawsuit or arbitration based on or arising out of this Agreement will be entitled to recover from the other party its costs and expenses (including attorney's fees) reasonably incurred in connection with such lawsuit or arbitration.

16.5 Arbitration. Any and all disputes relating to or arising from this Agreement will be resolved by binding arbitration to be held in Seattle, Washington under the American Arbitration Association Rules.

16.6 No Conflict. Each party represents and warrants that it is authorized to enter into this Agreement and that the terms of this Agreement do not create a conflict with any right, obligation or agreement that it has with any third party.

16.7 Waiver. Xcyte's failure to enforce any provision of this Agreement or a Purchase Order will not be a construed as a waiver of such provision and will not affect Xcyte's right to enforce each and every provision of this Agreement.

16.8 Severability. If any term or provision of this Agreement is held invalid or unenforceable, the remaining terms will be valid and enforced to the fullest extent permitted by applicable law.

16.9 Governing Law. This Agreement will be governed by and construed in accordance with the laws of the State of Washington, USA, without regard to its conflict of law rules, and not by the provisions of the 1980 U.N. Convention of Contracts for the International Sale of Goods. Except as set forth in Section 16.6, the parties hereby irrevocable submit to the jurisdiction of the state and federal courts located in King County, Washington.

16.10 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall constitute an original, and all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, each of the parties has caused this Agreement to be executed by its duly authorized representative as of the date first set forth above.

DIACLONE:

DIACLONE, S.A.

By: /s/: John Wijdenes

Name: John Wijdenes

Title: President and CEO

XCYTE:

XCYTE THERAPIES, INC.

By: /s/: Ronald Jay Berenson

Name: Ronald Jay Berenson

Title: President and CEO

EXHIBIT A

PRODUCTION PROTOCOL

[*]

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT B

SPECIFICATIONS

[*]

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT C

CELL LINE QUALIFICATION

[*]

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT D

REGULATORY SUBMISSIONS

I. Process Validation and Production Records:

- Diaclone will provide existing summary validation reports for virus removal, DNA removal and removal of other process specific materials, etc.
- Diaclone will provide full reports for submission to regulatory authorities, if required.
- Diaclone will provide a complete set Batch Records for the Production of the [*] Master Cell Bank, Working Cell Bank, Bulk Supernatant, Purified Bulk Antibody, and Filling Record.

II. Facilities and Equipment:

- Diaclone will provide documentation of its Facilities, Equipment, and Operational procedures as requested by Xcyte or Regulatory Agency for support of regulatory submissions.

III. Product Testing:

- Diaclone will provide copies of all relevant Standard Operating Procedures, Test Methods and Study Protocols used in the testing of the [*] cell line, bulk supernatant, and Lot Release of purified immunoglobulin.
- Diaclone will provide full reports of results for submission to regulatory authorities, as requested by Xcyte or Regulatory Agency.

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT E

PRODUCTION MATERIALS

The following materials are to be dedicated to the manufacture of **[*]** antibody for Xcyte:

[*]

TOTAL **[*]**

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT F

BIOSAFETY TESTING

Cell Line **[*]**

[*]

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

XCYTE

FIRST AMENDMENT TO LICENSE AND SUPPLY AGREEMENT BETWEEN DIACLONE AND XCYTE THERAPIES DATED OCTOBER 15, 1999.

This First Amendment to the License and Supply Agreement is entered into as of August 15, 2000 ("Effective Date") by and between Xcyte Therapies, a Delaware corporation having a principal place of business at 1124 Columbia Street, Seattle, Washington 98104, United States ("Xcyte") and Diaclone S.A., a French corporation having a principal place of business at One Boulevard Fleming, B.P. 1985 F-25020 Besancon Cadet, France ("Diaclone").

WHEREAS. Xcyte and Diaclone wish to clarify and update certain aspects of the License and Supply Agreement dated October 15, 1999 between Xcyte and Diaclone ("the Agreement");

NOW THEREFORE, the parties hereby amend the Agreement as follows:

1. **Section 6.3(b)** of the Agreement shall be replaced in its entirety with the following:

"(b) Combination Products. In the event that a Licensed Product is used or sold by Xcyte in combination as a single product without or more other product(s) or service(s) which are not Licensed Products, Net Sales from such sales and/or use for purposes of calculating the amounts due under Section 6.3(a) above shall be calculated by multiplying the Net Sales of that combination by the fraction A1(A+B), where A is the gross selling price of the Licensed Product sold separately and B is the gross selling price of the other product or service sold separately. In the event that no such separate sales or use of a Licensed Product are made by Xcyte, Net Sates for royalty determination shall be calculated by multiplying Xcyte's cost for making or having made a Licensed Product ("Cost") by 1.5 (i.e., Cost x 1.5). It is understood and agreed that Xcyte Intends to use Licensed Products in connection with products and services which do not entail the use of the Licensed Materials, and that such Licensed Products shall be subject to this Section 6.3(b)."

2. **Section 10.1** of the Agreement shall be replaced in its entirety with the following:

"10.1 Term. The term of this Agreement will begin on the Effective Date and will continue, subject to early termination as provided in Section 10.2, for a period of fifteen (15) years from the date of first approval by FDA or its foreign equivalent of a Licensed Product for therapeutic uses. At the end of the fifteen (15) years, Xcyte will have a perpetual, irrevocable, fully paid up, royalty free, exclusive license to the Licensed Materials and Licensed Know-Row with all of the rights granted in Section 2.1."

3. **Section 10.2 (d)** of the Agreement shall be deleted in its entirety.

4. **Section 10.3** of the Agreement shall be replaced in its entirety with the following:

"10.3 Effect of Termination. Neither party will be relieved of any obligations incurred under this Agreement prior to the date of such termination or expiration by the termination or expiration thereof, and the provisions of Sections 1, 3.6, 3.8,4,5.8,7.4,9, 10, 12, 13, 14, 15, and 16 will survive any such termination or expiration."

5. In Section 15 of the Agreement, Xcyte's notice information shall be replaced with the following:

"Xcyte Therapies, Inc.
1124 Columbia Street
Seattle, Washington 98104
United States
Attn: Business Development
FAX: 206-262-0900"

6. In Section 15 of the Agreement, the name "William W. Ericson" shall be changed to "Sonya Erickson."

7. Other than as amended by this Amendment, the terms and conditions shall continue in full force and effect and are incorporated by reference in their entirety.

8. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

The parties have executed this Amendment as of the date first written above.

FOR XCYTE:	FOR DIACLONE:
/s/ RON BERENSON, MD	/s/ JOHN WIJDENES
Signature	Signature
Ron Berenson	John Wijdenes
Name	Name
President & CEO	Director
Title	Title

Exhibit 10.34

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [*]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

EXECUTION COPY

DEVELOPMENT AND SUPPLY AGREEMENT

This Development and Supply Agreement (the "Agreement") is made and entered into as of the 1st day of August, 1999 (the "**Effective Date**") by and between XCYTE THERAPIES, INC., a Delaware corporation with offices at 1124 Columbia Street. Suite 130 Seattle, Washington 98104 (hereinafter referred to as "**Xcyte**"), and DYNAL A.S., a Norwegian corporation, with offices at P.O. Box 158, Skøyen, N-0212 Oslo, Norway (hereinafter referred to as "**Dynal**").

WITNESSETH:

WHEREAS Dynal has substantial knowledge and a proprietary position and expertise relating to research, development, manufacture and distribution of products and technology for biomagnetic separation and handling of cells, microorganisms, bacteria, proteins and nucleic acids;

WHEREAS Xcyte has substantial knowledge and a proprietary position and expertise relating to the ex vivo expansion and activation of T-cells;

WHEREAS prior to entering into this Agreement the parties executed a Letter Agreement dated October 27, 1999 (the "**Letter Agreement**") whereby Xcyte paid Dynal the sum of one hundred thousand U.S. dollars (U.S.$100,000) in consideration for certain development activities conducted by Dynal prior to the Signing Date; and

WHEREAS Dynal and Xcyte wish to establish a development and supply agreement whereby Dynal will develop, manufacture and supply certain products that will incorporate certain paramagnetic particles (with and without antibodies) to be commercialized by Xcyte in one or more therapies in the Field (as such term is defined below), as set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and promises contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

SECTION 1: DEFINITIONS OF TERMS

1.1 "Affiliate" shall mean a person or entity that, directly or indirectly through one or more intermediaries controls, is controlled by, or is under common control with, a party to this Agreement. As used in this definition, "**control**" means owning more than fifty percent (50%) of such an entity or party to this Agreement.

1.2 "Antibodies" shall mean the antibodies described in the antibody specifications set forth in Attachment A hereto. The antibody specifications set forth in Attachment A may be modified from time to time by the mutual agreement of the parties (including modifications as may be appropriate to include the release criteria for Phase III) and neither party shall unreasonably withhold its consent to modifications proposed by the other party.

1.3 "Assays" shall mean the assays determined mutually by the parties (except that Xcyte shall determine the functional Assays performed and paid for by Xcyte pursuant to Section 2.8, with Dynal's acceptance (such acceptance not to be unreasonably withheld)) and set forth in a Work Plan to be required for the completion of the work called for in such Work Plan, including all existing or to-be-developed standards, specifications, validation protocols and reports related thereto.

1.4 "Nascent Beads" shall mean any beads or paramagnetic particles that are not conjugated with antibodies or any other materials or substances or coated with any materials or substances.

1.5 "CD3x28 Beads" shall mean any paramagnetic particles or beads that are doubly conjugated with antibodies to CD3 and antibodies to CD28 and that are not conjugated with any other antibodies.

1.6 "cGMP" shall mean current Good Manufacturing Practices, as defined in 21 CFR Part 210, Part 211, Part 610 and Part 680.

1.7 "Development Phase" shall mean and refer to, as the context indicates the period during the term of this Agreement starting on the Effective Date and ending when Xcyte receives final marketing approval from the U.S. Food and Drug Administration or any successor thereto (the **"FDA"**) to use the Products in the Field for the first indication under this Agreement.

1.8 "DMF" shall mean a drug master file or device master file, as the context indicates (or the non-U.S. equivalent as appropriate in each country of the Territory) or any related regulatory filing.

1.9 "Dynabeads® M-450 CD3/CD28 T" shall mean the Dynabeads® M-450 CD3/CD28 beads consisting of Dynabeads® M-450 epoxy beads conjugated with the Antibodies, to be developed and manufactured pursuant to this Agreement in accordance with the Dynabeads® M-450 CD3/CD28 T Specifications.

1.10 "Dynabeads® M-450 Epoxy T" shall mean Dynabeads® M-450 epoxy beads, to be developed and manufactured pursuant to this Agreement in accordance with the Dynabeads® M-450 Epoxy T Specifications.

1.11 "Field" shall mean ex vivo expansion and/or activation of T-cells using CD3x28 Beads (whether or not in conjunction with one or more other beads, paramagnetic particles, steps or procedures) for Therapeutic Use; provided, however, that the Field shall exclude the following:

(a) any and all uses in multiarray microfluidic chip format analyzers; and

(b) any use in process or multiarray chip format that comprises general or special applications in DNA/RNA-technology, including isolation of DNA/RNA fragments (DNA/RNA probes), peptide nucleic acids (PNA), plasmids, oligonucleotides, or any other subcellular components (Mitochondria, Endoplasmic reticulum, Golgi apparatus, etc.)

1.12 "Patents" shall mean all patents and patent applications, and all additions, divisions, continuations, continuations in-part, pipeline protection, substitutions, reissues, extensions, registrations, patent term extensions, supplementary protection certificates and renewals of any of the above.

1.13 "Products" shall mean, collectively, the Dynabeads® M-450 Epoxy T and the Dynabeads® M-450 CD3/CD28 T.

1.14 "Signing Date" shall mean December 7, 1999, the date this Agreement was signed by the parties.

1.15 "Specifications" shall mean:

(i) the release criteria and specifications for the Dynabeads® M-450 Epoxy T as set forth in Attachment C hereto, and as the same may be refined and amended from time to time by Dynal (the **"Dynabeads® M-450 Epoxy T Specifications"**); and

(ii) the release criteria and specifications for the Dynabeads® M-450 CD3/CD28 T as set forth in draft form in Attachment D hereto, and as the same may be refined, amended and finalized in the course of the development activities under this Agreement by the mutual agreement of Dynal and Xcyte (the **"Dynabeads® M-450 CD3/CD28 T Specifications"**).

Neither party shall unreasonably withhold its consent to an alteration or supplementation to the Dynabeads® M-450 CD3/CD28 T Specifications.

1.16 "Territory" shall mean the world.

1.17 "Therapeutic Use" shall mean the attempt to cure, improve, mitigate, treat and/or prevent disease and/or other conditions in humans.

1.18 "Third Party" shall mean any person or entity other than a party to this Agreement or an Affiliate of a party to this Agreement.

1.19 "Work Plans" shall mean the work plans which detail the parties' respective tasks and responsibilities with respect to the development work to be conducted during the Development Phase in connection with the Dynabeads® M-450 CD3/CD28 T under this Agreement in connection with filing and obtaining final marketing approval from the FDA in the United States as set forth in **Attachment B**, and as may be amended or modified from time to time, by mutual agreement of the parties. Subject to Section 2.5, neither party shall unreasonably withhold its consent to amendments or modifications of the Work Plans proposed by the other party.

1.20 "Year" shall mean a calendar year.

SECTION 2: DEVELOPMENT PHASE AND REGULATORY FILINGS

2.1 During the Development Phase, Dynal shall use its good faith and commercially reasonable efforts to complete its responsibilities under the Work Plans in accordance with the standards and time frames stated therein and the terms and conditions of this Agreement. If Xcyte does not complete its responsibilities under the Work Plans in accordance with the standards and time frames stated therein and/or the terms and conditions of this Agreement, Dynal shall not be entitled to terminate this Agreement therefor, but Dynal shall be afforded additional time to accomplish such activity to the extent necessary to account for any such delay caused by or as a result of actions or inactions of Xcyte or its Affiliates or agents. As of the Signing Date, the Work Plans detail the development activities to be conducted through Phase I of the Development Phase, but only provide a general outline of the development activities to be conducted during Phase III of the Development Phase, and therefore, the parties shall after the Signing Date, amend the Work Plans to detail the Phase III activities during the Development Phase, as mutually agreed by the parties. The parties shall use commercially reasonable efforts to so amend the Work Plans to detail the Phase III activities by April 1, 2000.

2.2 The parties shall, promptly after the Signing Date, each designate a representative to act as a contact person for the other party and to coordinate and communicate between the parties with respect to each party's respective development activities under this Agreement during the Development Phase. A party may change its designee at any time by written notice to the other party. During the Development Phase, each party shall prepare and provide to the other party written reports on a quarterly basis detailing its development activities and progress under the Work Plans under this Agreement, and each party shall also keep the other party generally updated on a monthly basis of its development activities and progress under this Agreement.

2.3 As part of Dynal's activities under the Work Plans, Dynal, at its cost, shall duly file with the FDA and the regulatory agencies in the countries included in the European Union (the **"EU"**), and shall own, all DMFs that are to be filed in connection with the Products. With respect to countries in the Territory outside of the United States and the EU, Dynal shall, at Xcyte's cost, if and as requested by Xcyte, duly file with the regulatory agencies in such countries, and shall own, all DMFs for the Products. During the term of this Agreement and after the term of this Agreement upon non-renewal of this Agreement or termination of this Agreement pursuant to Section 8.3 by Xcyte, Xcyte shall have the right to cross-reference all DMFs filed during the term of this Agreement by Dynal in the Territory as necessary to enable Xcyte to obtain or maintain marketing approval for use of the Products in the Field. Xcyte or its Antibody suppliers shall duly file with the FDA and the applicable regulatory agencies in the Territory outside the United States and shall own all regulatory filings for the Antibodies. If Xcyte makes any regulatory filings in the Territory relating to the Products and/or their use in the Field, Dynal shall have the right to cross-reference such regulatory filings in the Territory as necessary in connection with Dynal's obligations under this Agreement, including with respect to accomplishing activities under the Work Plans, making DMF filings for the Products and manufacturing and supplying the Products to Xcyte under this Agreement. If a regulatory agency in the Territory will not grant marketing approval to Xcyte for use of the Products in the Field based upon a cross-reference to a DMF for the Products made by Dynal or its agent for the Field, and requires that Xcyte submit the information that is (or if not yet filed in such country, would be) included in Dynal's DMF for the Products in such country for the Field, Dynal shall provide the information that is (or if not yet filed in such country, would be) included in Dynal's DMF for the Products for the Field solely for Xcyte to include such information in its filing to the regulatory agency to obtain marketing approval for use of the Products in the Field in such country and for no other use or purpose; provided that Xcyte provides Dynal with written confirmation from the regulatory agency in such country that the regulatory agency will not allow a cross-reference to Dynal's DMF for the Product, and requires the information that is (or if not yet filed in such country, would be) included in Dynal's DMF for the Products.

2.4 In order to fund Dynal's work directed toward the accomplishment of the development activities under the Work Plans as well as for activities undertaken by Dynal prior to the Signing Date, Xcyte shall make the following non-creditable and non-refundable milestone payments to Dynal as follows:

(i) Xcyte shall pay to Dynal five hundred thousand U.S. dollars (U.S.$500,000), one hundred thousand U.S. dollars (U.S.$100,000) of which was paid by Xcyte to Dynal prior to the Signing Date pursuant to the Letter Agreement, and the remaining four hundred thousand U.S. dollar (U.S.$400,000) of which shall be paid to Dynal on January 3, 2000 (**"Milestone Payment 1"**);

(ii) When [*****] Xcyte shall pay to Dynal five hundred thousand U.S. dollars (U.S.$ 500,000) **("Milestone Payment 2")** (Dynal shall have no obligation to [*****] prior to receiving Milestone Payment 2 from Xcyte);

(iii) On and as of April 1, 2000, Xcyte shall be obligated to pay Dynal one million U.S. dollars (U.S.$ 1,000,000), five hundred thousand U.S. dollars (U.S.$500,000) of which **("Milestone Payment 3")** shall be paid to Dynal on April 1, 2000 and the five hundred thousand U.S. dollar (U.S.$500,000) balance of which **("Milestone Payment 4")** shall be paid to Dynal on October 1, 2000;

(iv) When [*****] Xcyte shall pay to Dynal five hundred thousand U.S. dollars (U.S.$ 500,000) **("Milestone Payment 5")** (Dynal shall have no obligation to [*****] prior to receiving Milestone Payment 5 from Xcyte); and

(v) When (a) the [*****] (Xcyte shall notify Dynal when to commence the production of such [*****]); and (b) Dynal has [*****] Xcyte shall pay to Dynal five hundred thousand U.S. dollars (U.S.$ 500,000) **("Milestone Payment 6")** (Dynal shall have no obligation to [*****] prior to receiving Milestone Payment 6 from Xcyte).

The milestone payments set forth in this Section 2.4 shall be paid by Xcyte by wire transfer to an account designated by Dynal.

2.5 Notwithstanding anything contained in this Agreement, in no event shall Dynal be obligated to perform any activities under this Agreement that would require efforts or expenditures in excess of the scope reasonably contemplated by the parties as of the Signing Date, as reflected from time to time in Work Plans, to complete the development of the Dynabeads® M-450 CD3/CD28 T Product during the Development Phase in connection with obtaining marketing approval from the FDA to use the Products in the Field for the first indication under this Agreement, and as contemplated to make the regulatory filings pursuant to Section 2.3.

2.6 Xcyte shall, at its discretion and at its expense, apply for marketing approval in the United States and in the other countries in the Territory, as determined by Xcyte, and shall conduct and control all Phase I, Phase II (or Phase I/II), and Phase III clinical trials in the Field using the Products as Xcyte considers necessary and appropriate, in light of applicable regulatory requirements and the results obtained to date. Except as otherwise expressly set forth in this Agreement, including Sections 2.3 and 6, Xcyte shall own all clinical protocols, all results of such clinical tests, all other clinical data required for regulatory submissions and approvals, all such regulatory filings, and any and all regulatory approvals.

2.7 Dynal shall inform Xcyte of any amendments to the Dynabeads® M-450 Epoxy T Specifications.

2.8 Xcyte shall own any and all proprietary rights relating to the functional Assays, provided that Xcyte shall develop the functional Assays (including the inter-lab validation of the functional Assays) and shall pay for all costs and expenses associated therewith.

SECTION 3: SUPPLY AND DISTRIBUTION

3.1 During the term of this Agreement, and subject to the terms and conditions set forth herein, (a) Xcyte shall, as ordered by Dynal, supply Dynal with the Antibodies, at Xcyte's

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

cost, for use by Dynal solely for use in the production of the Dynabeads® M-450 CD3/CD28 T in accordance with the specifications for the Antibodies set forth in Attachment A and the Specifications; and (b) Dynal, subject to Xcyte's obligation to supply Antibodies to Dynal, shall supply to Xcyte, and Xcyte shall purchase from Dynal, all of Xcyte's and its Affiliates' requirements (i) for Dynabeads® M-450 CD3/CD28 T for use in clinical trials and other product research, development, certification or regulatory activities conducted in connection with either or both of the Products in the Field in the Territory; and (ii) for Dynabeads® M-450 CD3/CD28 T for use, marketing, distribution, sale and import by Xcyte and its Affiliates in the Field in the Territory; and (iii) to be held in reasonable inventories associated with any of the foregoing.

3.2 During the term of this Agreement, Dynal shall supply to Xcyte, and Xcyte shall purchase from Dynal, all of Xcyte's and its Affiliates' requirements (a) for Dynabeads® M-450 Epoxy T for use in clinical trials and other product research, development, certification or regulatory activities conducted in connection with either or both of the Products in connection with the Dynabeads® M-450 CD3/CD28 T in the Field in the Territory; (b) for Dynabeads® M450 Epoxy T for use, marketing, distribution, sale, and import by Xcyte and its Affiliates in connection with the Dynabeads® M-450 CD3/CD28 T in the Field in the Territory; and (c) to be held in reasonable inventories associated with any of the foregoing. For the avoidance of doubt, to the extent that Dynal has to conduct any development activities with respect to the Dynabeads® M-450 Epoxy T, Dynal shall ensure that it conducts such activities in a timely manner so that it will be able to supply Xcyte the Dynabeads® M-450 Epoxy T Product when it supplies Xcyte the Dynabeads® M-450 CD3/CD28 T Product, as provided under this Agreement.

3.3 Xcyte shall ensure that any Products to be sold or otherwise distributed by Xcyte or its Affiliates or any of their distributors, licensees or agents, for use in the Field shall be appropriately labeled to state that the use thereof is limited to use solely within the Field. If either party becomes aware that Products are being used outside the Field or outside the Territory, it shall promptly notify the other party hereto. Xcyte shall and shall ensure that its Affiliates and each of their distributors, licensees and agents shall, use its reasonable commercial efforts to preserve the quality of the Products and shall act in accordance with any applicable quality control guidelines for the Products provided to Xcyte by Dynal.

3.4 Xcyte shall not, and shall ensure that its Affiliates and that their respective distributors, licensees and agents shall not, sell or use any Products or perform any treatments utilizing the Products not in compliance with applicable laws, regulations and orders. If either party becomes aware that Products are being used, or that treatments are being performed using the Products, not in compliance with applicable laws, regulations and orders, it shall promptly notify the other party hereto.

3.5 Xcyte shall, and shall ensure that its Affiliates and/or its and its Affiliates' distributors, licensees and agents shall, only sell and distribute the Products for use in the Field in the Territory pursuant to the terms and conditions of this Agreement, and in doing so neither Xcyte nor its Affiliates shall use or sell or otherwise distribute, and shall ensure that their respective distributors, licensees and agents shall not use or sell or otherwise distribute, the

Dynabeads® M-450 Epoxy T for any use except in connection with the Dynabeads® M-450 CD3/CD28 T and only in the Field. Xcyte shall remain primarily liable and responsible for the performance and observance of all of its and its Affiliates' and each of their consultants, distributors' and licensees' and agents' duties and obligations in accordance with the terms and conditions of this Agreement. Any agreement between Xcyte and any of its Affiliates or any of their consultants, distributors, licensees or agents shall be consistent with the terms and conditions of this Agreement and shall include appropriate obligations of confidentiality and a limitation to use of the Products solely within the Field.

3.6 During the term of this Agreement, Xcyte shall purchase all of its requirements for CD3x28 Beads and Nascent Beads for use in the Field; however, if Xcyte must substitute another CD3x28 Bead for the Dynabeads® M-450 CD3/CD28 T and/or another Nascent Bead for the Dynabeads® M-450 Epoxy T for medical (e.g., adverse medical reaction arising from use of the Dynabeads® M-450 CD3/CD28 T Product and/or the Dynabeads® M-450 Epoxy T Product) or regulatory (e.g., rejection of the Dynabeads® M-450 CD3/CD28 T Product and/or the Dynabeads® M-450 Epoxy T Product by a regulatory agency) reasons for use in the Field in any country or countries of the Territory, Xcyte shall promptly notify Dynal and provide Dynal with sufficient information and documentation to evidence the medical and/or regulatory reason or reasons that require Xcyte to substitute the Dynabeads® M-450 CD3/CD28 I Product and/or the Dynabeads® M-450 Epoxy T Product. After such notice and provision of information and documentation have been provided to Dynal by Xcyte, the parties shall discuss in good faith what would be an acceptable substitute CD3x28 Bead and/or substitute Nascent Bead, and after the parties mutually identify, or a party identifies, in writing, an acceptable substitute, unless Dynal notifies Xcyte in writing that it does not wish (as determined by Dynal in its sole discretion) to supply Xcyte with the substitute CD3x28 Bead and/or substitute Nascent Bead, the parties shall negotiate in good faith the terms and conditions of a development and/or supply agreement for the substitute CD3x28 Bead and/or substitute Nascent Bead for such country or countries upon commercially reasonable terms and conditions (subject to the limitations on Dynal's obligations set forth in Section 2.5). If the parties do not execute a full agreement which covers such development and/or supply arrangement within one hundred and twenty (120) days of commencing such good faith negotiations, Xcyte may obtain the substitute CD3x28 Bead and/or the substitute Nascent Bead from a Third Party; provided that Xcyte may not offer terms or conditions to any such Third Party which are more favorable in the aggregate to those offered to Dynal hereunder, unless such new terms and conditions have first been offered to Dynal and Dynal has not accepted such terms and conditions (or terms and conditions substantially similar thereto) in writing within sixty (60) days of such offer by Xcyte. If Dynal notifies Xcyte in writing at any time during the discussions or negotiations set forth in this Section above that it does not wish to supply Xcyte with the substitute CD3x28 Bead and/or substitute Nascent Bead as provided in this Section above, Xcyte may obtain the substitute CD3x28 Bead and/or the substitute Nascent Bead from a Third Party.

3.7 In the event that Xcyte plans to acquire, use, develop, sell or distribute any beads or paramagnetic particles (other than the Products, CD3x28 Beads and Nascent Beads) for use in the Field in addition to either or both of the Products, Xcyte shall promptly notify Dynal detailing the beads or paramagnetic particles that Xcyte requires and thereafter the parties shall in good

faith attempt to negotiate the terms and conditions of a development and/or supply agreement for such beads and/or paramagnetic particles for the Territory. If the parties do not execute an agreement which covers such development and/or supply arrangement within ninety (90) days of commencing such good faith negotiations, Xcyte may obtain such beads or paramagnetic particles from a Third Party.

3.8 Notwithstanding anything contained in this Agreement, if Xcyte undergoes a change of control during the Development Phase, such that Xcyte is directly or indirectly controlled by any person or entity that derives at least fifty percent (50%) of its revenue from the development and/or manufacture of beads and/or paramagnetic particles, Xcyte hereby agrees that it shall not, and hereby agrees to ensure that any such person or entity shall not, until the non-renewal of this Agreement or three (3) years after such change of control (whichever occurs first), disclose to such person or entity any information relating to the Products, or supply any Products to such person or entity. Notwithstanding anything contained in this Agreement, both during and after the term of this Agreement, such person or entity shall be treated as a Third Party for all purposes of this Agreement, regardless of whether such person or entity may be an "Affiliate" of Xcyte after such change of control. As used in this clause, **"change of control"** means any event (whether in one or more transactions) which results in a transfer of direct or indirect ownership of more than fifty percent (50%) of the voting stock of Xcyte to a previously unaffiliated third party.

3.9 For the avoidance of doubt and without limiting either party's development and supply obligations under this Agreement, in no event shall this Agreement restrict: **[*]**

SECTION 4: PRICE, PAYMENT AND DELIVERY

4.1 Dynal shall supply to Xcyte reasonable quantities of samples of the Dynabeads® M-450 Epoxy T and of the Dynabeads® M-450 CD3/CD28 T, in quantities and supply schedules as are more fully described in the Work Plans for use by Xcyte and Xcyte's consultants during the Development Phase. During the Development Phase and prior to the point at which the Products being supplied will be used in Phase I clinical trials, the Products shall be provided by Dynal without charge to Xcyte.

4.2 Starting at the point during the Development Phase at which the Products being supplied to Xcyte by Dynal will be used in Phase I clinical trials, the initial price of Products sold to Xcyte shall be the applicable price set forth on Attachment E hereto (regardless of the concentration of beads in each vial, which concentration shall be determined by Xcyte, provided that no such concentration shall be in excess of 4×10^8 beads/ml in a 10 ml vial). All such prices are quoted FCA, Oslo, Norway (Incoterms 1990). Such prices shall not be increased until **[*]** and thereafter, Dynal may raise such prices no more often than **[*]** Anything in this Section 4.2 to the contrary notwithstanding, no annual increase shall have the effect of raising the previous year's price by **[*]**

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

4.3 Dynal shall deliver the Products ordered by Xcyte pursuant to this Agreement to Xcyte, FCA Oslo, Norway (Incoterms 1990). Risk of loss shall pass to Xcyte on delivery of the Products to the carrier selected by Xcyte. Dynal shall include the information as described in Attachment F with each shipment of the Products. Upon delivery of the Products to Xcyte's carrier, Dynal shall invoice Xcyte, and Xcyte shall make payment to Dynal within thirty (30) days from the date of the invoice. Upon request by Xcyte, Dynal shall transmit invoices by facsimile or by any other means mutually agreed to by the parties. Notwithstanding the foregoing, or anything contained in this Agreement, with respect to Dynabeads® M-450 CD3/CD28 T Product ordered by Xcyte and delivered to Xcyte hereunder that is part of a batch of the Dynabeads® M-450 CD3/CD28 T produced by Dynal for Phase I clinical trials and/or other development work to be performed during such period of the Development Phase, Xcyte may make payment to Dynal for such Dynabeads® M-450 CD3/CD28 T Product so ordered by Xcyte within twelve (12) months (instead of thirty (30) days) from the date of the invoices for such Product.

4.4 Xcyte shall pay interest to Dynal on any overdue payments under this Agreement at a rate of **[*]** per month overdue from the date due until payment.

4.5 Dynal reserves the right to alter the payment procedures set forth in this Agreement in the event that Xcyte has previously (within the then-most recent three-month period) failed to conform to the payment provisions hereof and if and for so long as Dynal is reasonably concerned about Xcyte's financial condition. Such alterations in payment terms shall be either a requirement of an irrevocable, confirmed letter of credit or a requirement of cash prior to delivery.

4.6 Xcyte shall not require a delivery date of earlier than ninety (90) days after the date of receipt of an order for Products by Dynal. Orders by Xcyte for Products shall be sent to Dynal at P.O. Box 158, Skøyen N-0212, Oslo, Norway, or as otherwise may be directed by Dynal from time to time. Dynal shall use its reasonable efforts to fill orders from Xcyte which are in accordance with this Section 4 by the delivery date requested by Xcyte. Dynal shall acknowledge each Xcyte purchase order in writing and notify Xcyte of the estimated delivery date. Dynal shall promptly notify Xcyte if at any time Dynal has reason to be concerned that Dynal will not be able to fill any Xcyte order on time or as estimated or agreed.

4.7 Xcyte shall, starting at the thirtieth (30th) day following the end of the Development Phase and thereafter on a quarterly basis (by March 31st, June 30th, September 30th, and December 31st) of each Year, provide to Dynal a forecast of Xcyte's requirements for the Products for the ensuing twelve (12) month period for the Territory. The amount of Products specified for the first quarter of such twelve (12) month period shall be binding on Xcyte, and Dynal shall supply, and Xcyte shall be required to take delivery and pay for such amount of the Products. All amounts specified for succeeding quarters of a twelve (12) month period are considered a non-binding but good faith forecast.

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

4.8 In addition to the forecasts provided pursuant to Section 4.7, Xcyte shall provide to Dynal good faith non-binding three (3) Year forecasts for the Products for capacity and long-term manufacturing planning purposes. This three (3) Year forecast shall be provided by Xcyte to Dynal on or before the thirtieth (30th) day following the end of the Development Phase, and thereafter by August 31st of each Year, covering the succeeding three-Year period. In the event that the manufacture of the volumes of Dynabeads® M-450 CD3/CD28 T indicated by such three-Year forecast would require Dynal to make any capital expansions (including entering into any leases), the parties may meet to discuss in good faith how to proceed and whether Xcyte would be willing to commit to such forecasts if Dynal decides to make any capital expansion and/or enter into any leases (as Dynal shall decide in its sole discretion). Subject to the provisions of Section 4.10, in no event shall Dynal be required to meet any such forecast for the Dynabeads® M-450 CD3/CD28 T (beyond the levels stated therein that would not require Dynal to make such capital expansions) nor to obtain such capital expansions unless the parties agree in writing how to proceed and without Xcyte agreeing to purchase sufficient volumes of the Products and to amend this Agreement to increase the minimums set forth in Section 8.5.

4.9 All sales of Products to Xcyte shall be controlled by the terms and conditions of this Agreement and the standard terms and conditions of the business forms of the parties shall not form part of the agreement of the parties.

4.10 During the term of this Agreement, Dynal shall notwithstanding Section 4.8, fill any order (or series of orders) for any calendar quarter which are in accordance with this Article 4 and that is (or are) not in excess of one hundred twenty five percent (125%) of the volumes specified for such calendar quarter in Xcyte's most recent good faith quarterly estimate for such calendar quarter (i.e., that was not a binding order for such calendar quarter under Section 4.7), and Dynal shall not be required to fill any order or series of orders that are for any calendar quarter in excess of one hundred twenty five percent (125%) of the volumes specified for such calendar in Xcyte's most recent good faith quarterly estimate for such calendar quarter. However, Dynal shall nevertheless exert commercially reasonable efforts to fill all Xcyte orders and to supply all requested volumes to the extent the same may be done without extra cost to Dynal, and in doing so Dynal would not be in violation of any other agreement.

4.11 Notwithstanding anything contained herein, in no event shall Dynal be liable for any delay or failure to deliver Products for reasons beyond the control of Dynal, provided, however, that Dynal shall notify Xcyte promptly of anticipated delays and shall use all commercially reasonable efforts to fill such orders as soon as possible.

4.12 If Dynal is not able to manufacture the Products in the quantities ordered by Xcyte in accordance with the terms and conditions of this Agreement either itself or through its Affiliates, Dynal shall undertake to engage and qualify a Third Party contract manufacturer to manufacture those quantities of the Products that Dynal and/or its Affiliates are unable to supply to Xcyte, for supply to Xcyte subject to and in accordance with the terms and conditions of this Agreement (including the terms and conditions of this Agreement relating to Specifications, quality control and assurance, price, ordering, delivery, indemnities and warranties) and Xcyte shall continue to pay Dynal for the Products in accordance with Section 4. The parties recognize

that use of such a Third Party contract manufacturer would constitute a "Major Change" as such term defined in Attachment F, and that it will be handled in accordance with and shall be governed by the requirements in that Attachment.

4.13 All payments due to Dynal under this Agreement shall be paid in full, regardless of whether Xcyte or its Affiliates or their distributors or licensees are required to withhold taxes, levies or other duties on payments made under this Agreement. If Xcyte is required to withhold taxes, levies or other duties on payments made under this Agreement, then Xcyte shall gross up such payments so that Dynal receives the payment in full regardless of any withholdings, and if Dynal obtains any credit for the amount of the withholding, such amount shall be repaid by Dynal to Xcyte when it is received by Dynal.

SECTION 5: WARRANTY AND DISCLAIMER

5.1 Dynal warrants that the Products shall conform to the Specifications upon delivery to Xcyte's carrier, provided that in no event shall Dynal be responsible or liable for any failure of the Products to meet the Specifications as a result of defects in the Antibodies (other than any defect in the Antibodies caused solely because of a failure of Dynal or its Affiliates to act in conformity with any applicable quality control guidelines provided to Dynal by Xcyte). Xcyte shall promptly inspect the Products upon receipt and in accordance with any applicable quality control guidelines provided to Xcyte by Dynal, and shall promptly notify Dynal of any discovered failure of the Products to conform to the Specifications, but in no event later than thirty (30) days after Xcyte's receipt of the Products. Upon request by Dynal, Xcyte shall promptly return the non-conforming Products to Dynal. Upon verification that the Products failed to comply with the Specifications upon delivery to Xcyte's carrier other than because of defects in the Antibodies (other than any defect in the Antibodies caused solely because of a failure of Dynal or its Affiliates to act in conformity with any applicable quality control guidelines provided to Dynal by Xcyte), Xcyte shall receive, at Dynal's sole option, a credit, refund or replacement for such non-conforming Products. In the event that Dynal decides to replace such non-conforming Products with conforming Products, Dynal shall use reasonable commercial efforts to do so within sixty (60) days of such confirmation by Dynal, and Dynal shall in such event bear the cost of delivery and risk of loss or damage to the replacement Products during delivery. Notwithstanding anything to the contrary contained in this Agreement, Dynal shall not be responsible for any Products if such Products are removed from their original vials prior to inspection by Xcyte or are modified in any manner not in conformity with any applicable quality control guidelines provided to Xcyte by Dynal, nor for any use or misuse or actions or inactions by any person or entity after delivery of the Products to Xcyte's carrier.

THE FOREGOiNG WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND DYNAL EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. EXCEPT AS SET FORTH IN SECTION 10, XCYTE'S EXCLUSIVE REMEDY FOR ANY DEFECT IN THE PRODUCTS OR BREACH OF WARRANTY SHALL AT DYNAL'S OPTION BE CREDIT, REFUND OR REPLACEMENT AS SET FORTH IN THIS SECTION 5.

EXCEPT AS SET FORTH IN SECTION 10, IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR ANY SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT OR ANY OTHER LEGAL THEORY.

SECTION 6: INTELLECTUAL PROPERTY

6.1 Except as provided in Section 6.2, ownership of any and all inventions or other proprietary rights ("Inventions") developed in connection with activities under or performed in connection with this Agreement, including in connection with development and acceptance testing of the Dynabeads® M-450 Epoxy T and the Dynabeads® M-450 CD3/CD28 T or during or in connection with work performed under the Work Plans, shall be determined by reference to United States laws pertaining to inventorship. For example, (a) if Inventions is developed in connection with the development activities hereunder by one (1) or more employees or consultants of each party, it shall be jointly owned ("Joint Inventions"), and if one (1) or more claims included in an issued Patent or pending Patent application which is filed in a patent office in the Territory claim such Joint Inventions such claims shall be jointly owned ("Joint Patent Rights"); and (b) if Inventions is developed in connection with development activities hereunder solely by an employee or consultant of a party, it shall be solely owned by such party, and any Patent filed claiming such solely owned Inventions shall also be solely owned by such party. Each party shall ensure that its employee and consultant inventors of Inventions developed in connection with this Agreement shall assign his/her interest in such Inventions to his/her respective party employer (e.g., Dynal or Xcyte, as the case may be), and such rights shall therefore vest in the respective party employer to whom the inventor assigns his/her rights. The parties shall discuss and consult with each other in good faith as to the filing and prosecution of any joint patent applications covering Joint Inventions, the maintenance of any ensuing Joint Patent Rights covering such Joint Inventions, and the enforcement, defense and protection of any such Joint Patent Rights.

6.2 Notwithstanding anything contained in this Agreement, including Section 6.1: (a) any Inventions, including any know-how and data relating to any Dynabeads®, including the Dynabeads® M-450 and/or coupling to Dynabeads® and/or the coating of Dynabeads®, shall be owned solely by Dynal regardless of inventorship and Xcyte shall assign any and all such rights that Xcyte and/or its Affiliates or any of their agents may have in or to any such Inventions to Dynal, and such rights shall therefore vest in Dynal; and (b) any Inventions, including any know-how and data relating to the Antibodies shall be owned solely by Xcyte regardless of inventorship and Dynal shall assign any and all such rights that Dynal and/or its Affiliates or any of their agents may have in or to any such Inventions to Xcyte, and such rights shall therefore vest in Xcyte.

6.3 This Agreement contains no grants to either party under any intellectual property of the other party, except as expressly set forth in this Agreement.

6.4 Xcyte retains all right, title and interest in and to the Antibodies delivered or to be delivered to Dynal hereunder. Unless otherwise agreed by the parties, Dynal shall not at any time

during the term of this Agreement, divert or use any of the Antibodies for any other purpose or in support of any other product or service than the Dynabeads® M-450 CD3/CD28 T to be developed and manufactured hereunder solely for supply to Xcyte, and Dynal shall not authorize anyone else to do so.

SECTION 7: TRADEMARK, LABELING AND PACKAGING

7.1 Xcyte shall use the registered trademark "Dynabeads®" in the package inserts, labels and packaging and, to the extent appropriate, promotion and marketing materials, used in connection with the sale of the Products or the performance of the treatments using the Products, and each such package insert, label and packing and promotion and marketing materials that uses such trademark shall state: "Dynabeads® is a registered trademark of Dynal A.S., Oslo Norway, licensed to Xcyte" or equivalent language approved by Dynal. Xcyte and Dynal shall cooperate reasonably in the use by Xcyte of Dynal's trademark, so that such use will be consistent with applicable regulations, including any concerning or affecting the designation of Xcyte as the manufacturer. Subject to the terms and conditions of this Agreement, during the term of this Agreement, Dynal hereby grants to Xcyte a non-exclusive license to use the Dynabeads® trademark to such limited extent. The registered trademark "Dynabeads®" is and shall remain the sole and exclusive property of Dynal and all goodwill arising from the use of the Dynabeads® trademark shall enure to the benefit of Dynal. If necessary in any market to maintain Dynal's rights in Dynal's trademarks, Xcyte shall enter into a reasonable separate royalty-free license or registered user agreement regulating its use of the Dynal trademarks. Approval of such material by Dynal shall not be unreasonably withheld. Approval shall be deemed given in the event that Dynal does not otherwise so notify Xcyte within twenty-one (21) days after receipt of such material from Xcyte. During any periods in which Xcyte is so using any Dynal trademark(s), Xcyte shall periodically and upon reasonable request, provide Dynal with samples of any products and packages that bear, or that have been associated with, copies of all product literature, promotional material, advertising, product inserts, labeling and packaging and other printed materials that use, the "Dynabeads®" trademark, in order that Dynal may monitor the quality of products associated with such trademark(s).

7.2 The Products shall be labeled and packaged for delivery to Xcyte as provided in Attachment F.

SECTION 8: TERM AND TERMINATION

8.1 This Agreement shall come into effect on the Effective Date and unless terminated earlier as provided herein shall continue for a period often (10) years. Either party shall have the option to extend the term of this Agreement for an additional five (5) years after the initial ten (10) year term, by written notice to the other at any time at least one hundred and eighty (180) days prior to the end of the initial ten (10) year term. Following the end of the initial ten (10) year term (if it is not so renewed for an additional five (5) years), or the end of such five (5) year renewal term (if the ten (10) year initial term is so renewed), this Agreement shall be automatically renewed for successive one (1) year terms unless either party gives the other party

written notice of termination of the term at least ninety (90) days prior to the conclusion of the then-current term, to be effective at the end of such current term.

8.2 This Agreement may be terminated by either party upon the happening of any of the following events:

(i) if the other party shall generally cease to pay debts as they come due; or

(ii) if the other party shall cease to do business, enter into liquidation, or become subject to any bankruptcy law or enter into any agreement with its creditors or commit any similar act.

8.3 If either party shall fail to perform its material obligations under this Agreement, the other party shall have the right to terminate this Agreement upon ninety (90) days written notice to the defaulting party, provided, however, that if:

(i) such default is cured within the notice period, this Agreement shall not be terminated therefor; or

(ii) such failure is a failure by Dynal to accomplish an activity under the Work Plans or an obligation under this Agreement that is the responsibility of Dynal, within the time frame established in the applicable Work Plan or otherwise under this Agreement for such accomplishment or obligation, Dynal shall be afforded additional time to accomplish such activity to the extent necessary to account for any factors beyond its reasonable control (such as, without limitation, as a result of any action or inaction of the FDA) or as a result of any delay caused by or as a result of actions or inactions of Xcyte or its Affiliates or agents.

8.4 Either party may terminate this Agreement upon written notice to the other party at any time prior to the first filing by Xcyte with the FDA for a marketing approval of the treatments and/or products utilizing the Products in the Field, if the parties mutually agree in writing that the Products cannot, for scientific, regulatory or technical reasons not due to a breach hereof by the party seeking such a termination, be developed and certified for commercial use in the Field. Neither party shall unreasonably withhold its consent to any such mutual agreement.

8.5 Dynal may terminate this Agreement upon at least one hundred and eighty (180) days advance written notice to Xcyte:

(i) if Xcyte does not order from Dynal at least **[*]** of Dynabeads® M-450 CD3/CD28 T (measured by the **[*]** pursuant to Section 4.2) prior to end of the first twelve-month period following the end of the Development Phase and Dynal gives Xcyte its notice of such termination no later than sixty (60) days following the end of such twelve (12) month period; or

(ii) if Xcyte does not order from Dynal at least **[*]** pursuant to Section 4.2) in any twelve (12) month period that begins after the end of the first twelve-month period described

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested to the omitted portions.

above in clause (i) of this section and Dynal gives its notice of such termination no later than sixty (60) days following the end of such twelve (12) month period.

8.6 No termination or non-renewal of this Agreement shall extinguish any right or obligation that has accrued prior thereto, or that is a post-termination or post-non-renewal right or obligation under the terms and conditions of this Agreement, including those set forth in Section 11. Upon termination or non-renewal of this Agreement:

(i) Xcyte shall cease all use of Dynal's trademarks and other intellectual property rights and shall cooperate with Dynal in terminating any separate license or registered user agreement or recordal thereof; except that upon non-renewal of this Agreement or termination of this Agreement pursuant to Section 8.3 by Xcyte, Xcyte may continue to use the Dynabeads® trademark, subject to the terms and conditions of this Agreement, until the occurrence of the earlier of: (a) receipt by Xcyte of all applicable regulatory approvals to alter labeling, packaging, and promotional materials (which regulatory approvals Xcyte shall use reasonably commercial efforts to obtain as soon as possible after any such non-renewal or termination of this Agreement), and (b) one (1) year after such non-renewal or termination, and thereafter Xcyte shall cease all use of Dynal's trademarks and other intellectual property rights and shall cooperate with Dynal in terminating any separate license or registered user agreement or recordal thereof

(ii) all sums accrued hereunder prior to such termination or non-renewal shall become immediately due and payable; and

(iii) Xcyte shall continue after such termination or non-renewal to have the right to cross-reference the DMFs as provided in Section 2.3.

SECTION 9: QUALITY ASSURANCE

9.1 Certain obligations and responsibilities of Dynal and Xcyte with respect to the manufacture and quality control analysis of the Products under the Agreement shall be set forth in the applicable quality assurance guidelines set forth in Attachment F.

9.2 Certain obligations and responsibilities of Dynal and Xcyte with respect to the manufacture and quality control analysis of the Antibodies under the Agreement shall be set forth in the applicable quality assurance guidelines set forth in Attachment G.

SECTION 10: WARRANTIES; INDEMNIFICATION'S; INSURANCE

10.1 Each of Xcyte and Dynal represents and warrants to the other that:

(i) it has the full right, power and authority to enter into and perform this Agreement;

(ii) the execution and performance of this Agreement by it does not and will not violate any law or regulation, or any agreement to which it is a party or by which it is bound;

(iii) when executed and delivered, this Agreement will constitute the legal, valid and binding obligation of such party, enforceable against it in accordance with its terms; and

(iv) it has obtained, and shall at all times during the term of this Agreement hold and comply with, all licenses, permits and authorizations necessary to perform this Agreement as now or hereafter required under any applicable statutes, laws, ordinances, rules and regulations of the United States and any applicable foreign, state, and local governments and governmental entities.

10.2 Dynal hereby indemnifies and agrees to defend and to hold Xcyte, its successors and its Affiliates and each of their employees, directors, officers and agents harmless from and against all Third Party claims, liabilities, losses and expenses (other than lost profits) (including reasonable attorneys' fees) arising out of:

(i) the failure of the Products to meet the warranty set forth in Section 5; provided that in no event shall Dynal be responsible or liable for any failure of the Products to meet the Specifications as a result of: (a) defects in the Antibodies (other than any defect in the Antibodies caused solely because of a failure of Dynal or its Affiliates to act in conformity with any applicable quality control guidelines provided to Dynal by Xcyte) or (b) actions or inactions by any person or entity after delivery of the Products to Xcyte;

(ii) any Third Party claims for infringement or misappropriation of any intellectual property rights based on the method of manufacture or composition of the Dynabeads® included in the Product (but not for any other claims for infringement or misappropriation based on the use or sale of Dynabeads® or the Products, for which Xcyte shall indemnify and defend Dynal, its successors and its Affiliates and each of their employees, directors, officers and agents pursuant to Section 10.3) or

(iii) any breach or inaccuracy of any of Dynal's representations or warranties made herein.

10.3 Xcyte hereby indemnifies and agrees to defend and to hold Dynal, its successors and its Affiliates and each of their employees, directors, officers and agents harmless from and against all Third Party claims, liabilities, losses and expenses (other than lost profits) (including reasonable attorneys' fees) arising out of:

(i) the development, use, promotion, marketing, manufacture, distribution, sale or import of any of the Products and performance of treatments using any of the Products, including any actual or alleged infringement or misappropriation of any Intellectual Property of any Third Party, except for any Third Party claims expressly covered by Dynal's indemnification of Xcyte pursuant to Section 10.2 or

(ii) any breach or inaccuracy of any of Xcyte's representations or warranties made herein.

10.4 Each party shall communicate to the other notice of all claims falling within the indemnity provided by the other pursuant to Sections 10.2 and 10.3, as soon as possible after their receipt. The indemnified party shall cooperate fully with the indemnifying party in defending or otherwise resolving such claims. The indemnifying party shall have full control of the defense and settlement of all litigation brought against the indemnified party arising out of such claims, provided that any settlement or voluntary consent judgment shall require the consent of the indemnified party, such consent not to be unreasonably withheld. The indemnified party, at its expense, shall be entitled to participate in such defense through its own counsel, subject to the retention of control of such defense by the indemnifying party.

10.5 Each party shall obtain and keep in force during the term of this Agreement, and for a period of three (3) years after the non-renewal or termination of this Agreement, comprehensive general liability insurance covering bodily injury and property damage in amounts of not less than **[*]** per year combined single limit; covering completed operations liability and contractual liability in amounts of not less than **[*]** and, **[*]** Each party shall provide written proof of the existence of such insurance to the other party upon request.

SECTION 11: CONFIDENTIALITY AND PRESS RELEASES

11.1 It is understood by both Dynal and Xcyte that misuse or disclosure of Confidential Information of the other party could irreparably harm the business of the disclosing party or that party's Affiliates. As used herein, "Confidential Information" shall mean, subject to the exceptions set forth in Section 11.2, all confidential and proprietary information (including all other technology, know-how, data and records, whether written or oral or obtained through inspection of facilities or samples), which is obtained by a receiving party (Xcyte or Dynal, as the case may be) from a disclosing party (Xcyte or Dynal, as the case may be), where either it is identified by the disclosing party as being confidential at the time of disclosure or the circumstances of disclosure otherwise reasonably put the recipient on notice that the information or materials are treated as confidential or which receiving party should reasonably know should be treated as confidential. The parties agree:

(i) not to use such Confidential Information for any purpose other than for the purpose of this Agreement or as may otherwise be agreed by the parties in writing;

(ii) to use the same degree of care to maintain such Confidential Information in confidence as it applies to confidential information of its own of the same type, but in no event less than a reasonable standard of care, and not to disclose any portion of such Confidential Information to any person or entity other than as needed for the purposes of this Agreement;

(iii) to cause its Affiliates and each of its and its Affiliates' employees, Affiliates, licensees and consultants (and the employees of any thereof) who are to be given access to such Confidential Information to agree to be bound by the provisions of this Section 11 or by other provisions at least as protective as those set forth in this Section 11.

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

11.2 The provisions of this Section 11 shall not apply to:

(i) Information that can be demonstrated by the receiving party by credible evidence to be in the public domain at the time of disclosure.

(ii) Information that, after disclosure, can be demonstrated by the receiving party by credible evidence to have subsequently become part of the public domain other than as a consequence of a breach of this Agreement by the receiving party or its employees or agents.

(iii) Information that can be demonstrated by the receiving party by credible evidence to have been known or otherwise available to the receiving party prior to the disclosure by the disclosing party.

(iv) Information that, after disclosure, can be demonstrated by the receiving party by credible evidence to have been subsequently provided to the receiving party by a Third Party having the right to disclose such information and without obligations of confidentiality if the receiving party reasonably believes such disclosure does not violate any obligations of the Third Party to the disclosing party.

(v) Information that has been independently developed without the benefit of any reference to any disclosure hereunder from the other party.

(vi) Information that is required to be disclosed by law or regulation, provided that the party required to make such disclosure shall, to the extent practicable under such law or regulation and the circumstances, give the other party prior notice of such requirement and afford it an opportunity to seek restrictions or limitations on such disclosure.

11.3 Upon non-renewal or termination of this Agreement. the receiving party shall, upon the disclosing party's written request, promptly return to the disclosing party, all copies of Confidential Information received from the disclosing party, and shall return or destroy, and document the destruction of, all summaries, abstracts, extracts or other documents that contain any Confidential Information of the disclosing Party; except that the receiving party may retain copies of Confidential Information (including summaries, abstracts, extracts or other documents that contain any Confidential Information) received from the disclosing party if the retention of the same is necessary for regulatory purposes or is otherwise required by law or regulation, and in any event the receiving party may retain one (1) copy of Confidential Information received from the disclosing party for archival purposes.

11.4 The provisions of this Section 11 shall not terminate upon non-renewal or termination of this Agreement, but shall continue for a period of seven (7) years following the termination or non-renewal of this Agreement.

11.5 Unless otherwise agreed by the parties, the parties agree to issue, within thirty (30) days from the Signing Date, a mutually agreed upon press release. Neither party to this Agreement shall otherwise issue any press release or other publicity materials, or make any public presentation with respect to the terms or conditions of this Agreement without the prior

written consent of the other party (such consent not to be unreasonably withheld or delayed). This restriction shall not apply to disclosures required by law or regulation, including as may be required in connection with any filings made with the Securities and Exchange Commission or similar non-U.S. regulatory authority, or by the disclosure policies of a major stock exchange; provided, however, that if reasonably possible, the party making such disclosures shall inform the other party prior to any such disclosures.

SECTION 12: DISPUTE RESOLUTION

12.1 The parties intend that they shall resolve disputes and differences regarding the performance of their respective obligations under this Agreement in a spirit of cooperation and common purpose. In cases in which that does not occur (other than as to a question relating to patent validity), any differences between the parties arising from or in connection with this Agreement shall be resolved in accordance with the procedures set forth in this Section 12.

12.2 Any dispute arising from or in connection with this Agreement during the Development Phase shall be first presented to a senior executive of each party (with each party designating its own senior executive that shall handle such dispute) for resolution. If the designated senior executives are unable to resolve the dispute within thirty (30) days, then either party may initiate arbitration pursuant to Section 12.3.

12.3 Subject to Section 12.2, any and all disputes or legal proceedings to enforce this Agreement (other than as to a question relating to patent validity and except for any action to compel arbitration hereunder or an action to enforce any award or judgment rendered thereby) or in any way related to this Agreement shall be governed by this Section 12.3. Both the agreement of the parties to arbitrate any and all claims and disputes under this Agreement as provided in this Section 12.3, and the results, determination, finding, judgment and/or award rendered through such arbitration, shall be final and binding on the parties thereto and may be specifically enforced by legal proceedings in a court having jurisdiction over the party in question. Arbitration proceedings under this Agreement shall be conducted under the auspices of the International Arbitration Rules of the American Arbitration Association (the "AAA") in New York. Dynal shall appoint one (1) arbitrator, and Xcyte one (1) arbitrator, within a term of thirty (30) days from the date arbitration is required or invoked by the parties, and the two (2) arbitrators so appointed shall appoint the third arbitrator within a term of thirty (30) days from the date on which the later of the two (2) arbitrators have been selected, all in accordance with the rules of the AAA. If either party fails to select its arbitrator within the term mentioned above, or in the event that the two (2) selected arbitrators are unable or unwilling to select a third arbitrator within thirty (30) days, one shall be appointed in accordance with the rules of the AAA, and the three (3) arbitrators so selected shall constitute the arbitration panel for purposes of the dispute. Unless agreed otherwise by the parties, the parties shall have thirty (30) days thereafter to submit their position to the arbitrators, and the arbitrators shall be instructed and required to render their decision within thirty (30) days following completion of the arbitration. In any arbitration, the prevailing party shall be entitled to reimbursement of its reasonable attorneys' fees and the parties shall use all reasonable efforts to keep arbitration costs to a minimum.

12.4 Notwithstanding anything in this Section 12 to the contrary, if either party shall reasonably determine the need to seek injunctive or other expedited relief in connection with this Agreement, such party may do so in a court of competent jurisdiction.

SECTION 13: OTHER PROVISIONS

13.1 This Agreement contains the entire agreement between the parties relating to the subject matter hereof and all prior understandings, representations and warranties between the parties (including the Letter Agreement) are superseded by this Agreement.

13.2 None of the terms of this Agreement shall be deemed to be waived or amended by either party unless such a waiver or amendment specifically references this Agreement and is in writing signed by the party to be bound.

13.3 Notwithstanding anything contained herein, in no event shall either party be liable for any delay or failure hereunder for reasons beyond the control of such party, provided, however, that such party shall notify the other promptly of anticipated delays and shall use all reasonable efforts to perform as soon as possible.

13.4 All notices and demands required or permitted to be given or made pursuant to this Agreement shall be deemed effective upon receipt, in English and in writing (which term shall include telecopy) addressed to the people named below and shall be personally delivered or mailed by prepaid air mail, or sent by international courier requiring signed receipt for delivery, or sent by telecopy, provided such telecopy is promptly confirmed by electronic return receipt, addressed as follows:

If to Xcyte:

Xcyte Therapies, Inc.
1124 Columbia St., Suite 130
Seattle, WA 98104
Telecopy: 206-262-0900
Attn: President, CEO

If to Dynal:

Dynal A.S.
P.O. Box 158 Skøyen
N-0212 Oslo, Norway
Telecopy: 011-47-22-50-7015
Attn: President, CEO

or to such other address or person which either party may notify the other in writing.

13.5 This Agreement shall be binding upon and inure to the benefit of the parties and their permitted successors and assigns. This Agreement shall be assignable by either party (i) with the written consent of the other party, such consent not to be unreasonably withheld; or (ii) to an Affiliate; or (iii) to any successor by merger or upon sale of all or substantially all of its assets. Any attempted assignment which does not comply with the terms of this Section 13.4 shall be void.

13.6 This Agreement shall be governed by the laws of the State of New York, and all rights and remedies shall be governed by such laws without regard to principles of conflicts of

law. The Convention on Contracts for the International Sale of Goods shall not apply to this Agreement.

13.7 The parties do not intend to violate any public policy or statutory or common law. However, if any sentence, paragraph, clause or combination of this Agreement is in violation of any law or is found to be otherwise unenforceable by a court from which there is no appeal, or no appeal is taken, such sentence, paragraph, clause, or combination of the same shall be deleted and the remainder of this Agreement shall remain binding, provided that such deletion does not alter the basic structure of this Agreement. The parties shall negotiate in good faith to substitute for any such invalid or unenforceable provision, a valid and enforceable provision that achieves to the greatest extent possible the economic, legal and commercial objectives of the invalid or unenforceable provision. In the event the basic structure of this Agreement is altered as a result of such deletion, the parties shall renegotiate this Agreement in good faith, but should such negotiations not result in a new Agreement within ninety (90) days of the initiation of such negotiations, then this Agreement may be terminated by either party by thirty (30) days notice to the other.

13.8 The titles to sections of this Agreement are intended for the purpose of assisting the parties when working with this Agreement, and are not intended to have any effect on the interpretation of this Agreement. Where appropriate herein, singular terms shall be interpreted in the plural and plural terms interpreted as singular.

13.9 Dynal acknowledges that it is not an agent of Xcyte and has no authority to speak for, represent, or obligate Xcyte in any way, without first receiving written authorization from Xcyte. Xcyte acknowledges that it is not an agent of Dynal and has no authority to speak for, represent, or obligate Dynal in any way, without first receiving written authorization from Dynal. This Agreement does not and shall not be deemed to create any relationship of a joint venture or a partnership.

13.10 This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

* * *

IN WITNESS WHEREOF, the parties have executed this Agreement by their duly authorized representatives.

XCYTE THERAPIES, INC.

By: /s/ Ronald Jay Berenson

Name: Ronald Jay Berenson

Title: President & CEO

7 December 1999

DYNAL A.S.

By: /s/ Jeff Bork

Name: Jeff Bork

Title: CEO/President

7 December 1999

Attachment List

Attachment A	The Antibodies
Attachment B	Work Plans
Attachment C	Dynabeads® M-450 Epoxy T Specifications
Attachment D	Dynabeads® M-450 CD3/CD28 T Specifications
Attachment E	Per Vial Prices
Attachment F	Quality Assurance — Products
Attachment G	Quality Assurance — Antibodies

EXECUTION COPY

[*]

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Attachment A
to
Development and Supply Agreement dated as of August 1, 1999 between
Xcyte Therapies, Inc. and Dynal A.S. (the "Agreement")

(Terms used herein and not otherwise defined below
have the meanings defined in the Agreement)

The Antibodies

[*]

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Attachment B

to

Development and Supply Agreement dated as of August 1, 1999 between
Xcyte Therapies, Inc. and Dynal A.S. (the “Agreement”)

(Terms used herein and not otherwise defined below
have the meanings defined in the Agreement)

Work Plans

Work Plans attached hereto.

[Attachment B-1 to B-4]

[illustrations/graphs]

[*]

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXECUTION COPY

Attachment C

[*]

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXECUTION COPY

Attachment D

[*]

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Attachment E
to
Development and Supply Agreement dated as of August 1, 1999 between
Xcyte Therapies, Inc. and Dynal A.S. (the "Agreement")
(Terms used herein and not otherwise defined below
have the meanings defined in the Agreement)

[*]

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Attachment F

to

Development and Supply Agreement

dated as of August 1, 1999 between

Xcyte Therapies, Inc. and Dynal A.S. (the "Agreement")

(Terms used herein and not otherwise defined below

have the meanings defined in the Agreement)

Quality Assurance — Products

General

The purpose of this Attachment is to detail the obligations and responsibilities of Dynal and Xcyte with respect to the manufacture and quality control analysis of the Products under this Agreement in accordance with cGMP and NS-ISO 9001:1994 from Phase III forward. The obligations and responsibilities of the parties prior to Phase III will be consistent with the product development continuum of cGMP.

Procedures

Dynal shall establish, document and maintain a quality assurance procedure system which meets cGMP and all other requirements of relevant regulatory authorities.

Raw Materials

Dynal shall be responsible for acquiring all raw materials used in the manufacture of the Products and for analyzing and confirming compliance with the respective raw materials specifications.

Manufacturing

Dynal shall be responsible for manufacturing the Products in accordance with cGMP and the Specifications and, to the extent consistent with the Specifications, Dynal's standard manufacturing techniques and procedures. Dynal shall be responsible for performing the necessary process and method validations for the Products.

Packaging, Labeling and Storage

Dynal shall be responsible for packaging and labeling the Products in accordance with cGMP and the Specifications. Xcyte shall provide Dynal with all the information to be included on the labels of the Products except the batch specific data, and Dynal shall order such labels based upon information provided to Dynal by Xcyte. Upon receipt of the blue print labels, Dynal shall send a sample of each to Xcyte for review and final approval. If Xcyte has any revisions to such samples, Xcyte shall notify Dynal promptly of such revisions, but in no event later than twenty-one (21) days after Xcyte's receipt of each such sample from Dynal. If Xcyte does not provide Dynal with comments within such 21-day period, Dynal shall label the Products using the form of such labels as in the sample provided to Xcyte. Xcyte shall be solely responsible for ensuring that all labels for the Products are in compliance with applicable laws and regulations.

Dynal shall store the Products in accordance with cGMP and the Specifications.

All shipment of the Products will follow the cGMP requirements regarding the (i) packaging (ii) monitoring of the shipment in terms of temperature and time (iii) documentation. Xcyte is responsible for shipment validation.

Documentation

Dynal shall include the following information with each shipment of the Products: (i) Xcyte purchase order number, (ii) part number, (iii) Dynal lot number, (iv) lot number of the Antibodies used in manufacture of the Dynabeads® M-450 CD3/CD28, and (v) a Certificate of Analysis.

All batch manufacturing records shall be stored at Dynal's facilities. The batch manufacturing records and the Products shall be inspected prior to release by the Quality Assurance Department at Dynal. Xcyte shall have the right to inspect such records at Dynal's site and to conduct quality assurance audits upon reasonable notice at Dynal no more than once a year unless otherwise required by law or a regulatory agency.

Dynal shall confirm and document the shelf life of the Products in accordance with cGMP and the Specifications.

Complaint Handling

Dynal shall be responsible for the accuracy, sensitivity, specificity, purity and identity of the Products and shall conduct any investigations which are necessary in connection with a third party complaint concerning the Products; provided, however, that: (i) Dynal shall not be responsible or liable for any failure of the Products to meet the Specifications as a result of defects in the Antibodies not caused by any act or omission of Dynal or its Affiliates not in conformity with cGMP or any applicable quality control guidelines provided to Dynal by Xcyte with respect to the Antibodies; and (ii) Xcyte will conduct any investigations which are necessary in connection with a third party complaint, to the extent it concerns the Antibodies. Dynal shall retain samples of the Products at its facilities in accordance with cGMP and its standard procedures in case any complaint concerning the Products should result in an investigation.

In the event that either party receives any complaint regarding the Products involving a potential patient safety or other liability issue, it shall notify the other party promptly by telephone and facsimile and discuss the situation to the extent possible within the time available. The parties shall cooperate fully with each other, to the extent possible, in effecting any follow-up and communications with the customer. With respect to all other complaints, the receiving party shall notify the other party promptly by telephone and facsimile.

Major Changes

Major Changes with respect to the Antibodies are defined in, and shall be handled as provided in, Attachment G to the Agreement. Otherwise, each party shall inform the other party in writing prior to making any "Major Changes" to the Products (as defined below), and discuss its plan to implement such Major Changes with the other party. Such notification shall be sent from the Quality Assurance Manager or Regulatory Affairs Manager of such party to the Quality Assurance Manager or Regulatory Affairs Manager of the other party. Each party shall have no more than thirty (30) days from the date of such party's receipt of such notice to evaluate such Major Changes. Each party shall notify the other party of the time it needs to make such evaluation no later than thirty (30) days from the date it received such notice. Each party must obtain the written consent of the other party (such consent not to be unreasonably withheld or delayed) to any Major Changes prior to such party making such Major Changes to the Products.

As used herein, “Major Changes” are defined as:

- Changes in raw material specifications.
- Changes in production equipment.
- Changes in production processes.
- Changes in production scale.
- Changes in quality control methods.
- Changes in quality control specifications.
- Changes in packaging and labeling.
- Changes in storage and/or shipping requirements.

Inspection by Regulatory Agencies

Dynal shall notify Xcyte of any inspection of its facilities related to the Products by any regulatory agency, and, if it is able and has the right to do so, Dynal shall send Xcyte copies of any material written reports relating to such inspection within seven days after receipt or preparation of such reports.

Inspection by Regulatory Agencies

Xcyte shall notify Dynal, and shall require the Antibody Manufacturers to notify Xcyte, of any inspection of any of Xcyte’s or Antibody Manufacturer’s facilities related to the Antibodies by any regulatory agency, and, if it is able and has the right to do so, Xcyte shall send Dynal copies of any material written reports relating to such inspection within seven days after receipt or preparation of such reports.

Attachment G
to
Development and Supply Agreement dated as of August 1, 1999 between
Xcyte Therapies, inc. and Dynal A.S. (the "Agreement")

(Terms used herein and not otherwise defined below
have the meanings defined in the Agreement)

Quality Assurance—Antibodies

General

The purpose of this Attachment is to detail the obligations and responsibilities of Dynal and Xcyte with respect to the manufacture and quality control analysis of the Antibodies from Phase Ill forward. The obligations and responsibilities of the parties prior to Phase lU will be consistent with the product development continuum of cGMP.

Xcyte will obtain the Antibodies to be used in the manufacture of the Dynabeads® M-450 CD3/CD28 from one or more suppliers of Xcyte's choosing (the "Antibody Manufacturers"), and contract with Antibody Manufacturers for the manufacture of Antibodies in accordance with cGMP.

Procedures and Investigations

Xcyte shall require that the Antibody Manufacturers shall establish, document the Quality Assurance System which meets cGMP, including the utility, process and method validation. In the event of any third party complaint concerning the Antibodies, Xcyte shall be responsible in accordance with cGMP to require and to give the proper notifications (including without limitation all proper notice to Dynal), and to conduct any necessary investigations.

Packaging, Labeling and Storage

The Antibodies will be filled aseptically in sterile containers by the Antibody Manufacturer and labeled with the description of the Antibody, including the lot number from the Antibody Manufacturer, volume and expiry date.

Antibodies will be at all times stored under controlled, validated conditions according to the Specifications, and following the cGMP requirements.

All shipment of Antibodies (from the Manufacturer to Xcyte and from Xcyte to Dynal) will follow the cGMP requirements regarding the (i) packaging (ii) monitoring of the shipment in terms of temperature and time (iii) documentation. Xcyte is responsible for shipment validation. The Antibodies will be shipped to Dynal CIP Oslo, Norway (Incoterms 1990).

Documentation

Xcyte shall include the following documentation with each shipment of the Antibodies to Dynal: (i) description of the Antibody including the lot number from the Antibody Manufacturer and expiry date, (ii) Certificate of Analysis issued by the unit responsible for testing and compliance with Quality Control Specifications, (iii) releasing document (Certificate of Compliance) from the responsible Regulatory and/or QA Department(s), confirming the compliance with Quality Standards and Specifications.

All batch manufacturing production records shall be stored at the Antibody Manufacturers' or their agents' facilities. Xcyte shall require that the batch manufacturing production records and Antibodies shall be inspected prior to release by the Quality Assurance Department at Antibody Manufacturer in accordance with cGMP, and that the Antibody Manufacturers so certify. Dynal shall have the right to conduct quality assurance audits with respect to the Antibodies at Xcyte's facilities upon reasonable notice to Xcyte, and at the Antibody Manufacturers' facilities, in each case no more than once a year unless otherwise required by law or the FDA.

Major Changes

Xcyte shall inform Dynal in writing prior to making or authorizing any "Major Changes" (as defined below) to the Antibodies or their production or provision, and discuss its plan to implement such Major Changes with Dynal. Such notification shall be sent from the Regulatory Manager of Xcyte to the Quality Assurance Manager of Dynal. Dynal shall have no more than thirty (30) days from the date of receipt of such notice to evaluate such Major Changes and to raise any reasonable objections it may have thereto.

As used herein, "Major Changes" are defined as:

- Changes in Antibody Manufacturer.
- Changes in production equipment.
- Changes in production processes.
- Changes in quality control methods.
- Changes in quality control specifications.
- Changes in packaging and labeling.
- Changes in storage and/or shipping requirements.

Inspection by Regulatory Agencies

Xcyte shall notify Dynal, and shall require the Antibody Manufacturers to notify Xcyte, of any inspection of any of Xcyte's or Antibody Manufacturer's facilities related to the Antibodies by any regulatory agency, and, if it is able and has the right to do so, Xcyte shall send Dynal copies of any material written reports relating to such inspection within seven days after receipt or preparation of such reports

Exhibit 10.35

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [*****]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

LICENSE AGREEMENT

THIS LICENSE AGREEMENT (together with the attached Exhibits, the ("Agreement") is made as of July 8 (the "Effective Date") by and between Genetics Institute, Inc., a Delaware corporation with a business address at 87 Cambridge Park Drive, Cambridge, Massachusetts 02140 ("GI") and Xcyte Therapies, Inc., a Delaware corporation with a business address at 2203 Airport Way South, Suite 300, Seattle, Washington 98134 ("Xcyte").

1. Background.

1.1 GI. GI has acquired and/or licensed the rights to certain patents, as set forth in Exhibit D to this Agreement (the "Patents"), pursuant to agreements between GI and third parties (defined below as the "Licensors").

1.2 Xcyte. Xcyte desires to license and/or sublicense the Patents from GI, to make, use and sell Products (defined below) in the Field (defined below). GI is Willing, for the consideration and on the terms set forth herein, to license and/or sublicense the Patents to Xcyte for such purposes.

1.3 Agreement. In consideration of the mutual covenants and promises contained in this Agreement and other good and valuable consideration, the Parties agree as follows:

2. Definitions. As used in this Agreement, the following terms shall have the meanings set forth below.

2.1 "Affiliate" means any corporation, company, partnership, joint venture and/or firm which controls, is controlled by or is under common control with a Party. For purposes of this Section 2.1, "control" means (a) in the case of corporate entities, direct or indirect ownership of at least fifty percent (50%) of the stock or shares entitled to vote for the election of directors; and (b) in the case of non-corporate entities, direct or indirect ownership of at least fifty percent (50%) of the equity interest with the power to direct the management and policies of such noncorporate entities.

2.2 "Combination Product" means any Product sold in combination with one or more other products which are not Products.

2.3 "Confidential Information" shall mean(i) any proprietary or confidential information or material in tangible form disclosed hereunder that is marked as "Confidential" at the time it is delivered to the receiving party, or (ii) proprietary or confidential information disclosed orally hereunder which is identified as confidential or proprietary when disclosed and such disclosure of confidential information is confirmed in writing within thirty (30) days by the disclosing party.

"Confidential Information" does not include information which (a) was known to the receiving Party at the time it was disclosed, other than by previous disclosure

by the disclosing Party, as evidenced by written records at the time of disclosure; (b) is at the time of disclosure or later becomes publicly known under circumstances involving no breach of this Agreement; (c) is lawfully and in good faith made available to the receiving Party by a third party who did not derive it from the disclosing Party and who imposes no obligation of confidence on the receiving Party; or (d) is developed by the receiving Party independent of any disclosure by the disclosing Party.

2.4 **"Distributor"** means a third party which is not a Xcyte Affiliate or Sublicensee and which is a distributor, wholesaler or other entity purchasing Products from Xcyte or its Affiliate or Sublicensee for resale.

2.5 **"Field"** means *ex vivo* activation or expansion of human T-cells (including T-cells modified through gene transfer (except as indicated below) or otherwise) for treatment and/or prevention of infectious diseases (including, without limitation, AIDS), cancer and immunodeficiency states. It is understood and agreed that the Field shall not include activation or expansion of T-cells modified through gene transfer to specifically modify the T-cells to produce secreted or cell-surface membrane-bound proteins not normally expressed in significant levels by such T-cells, unless the cell-surface membrane-bound proteins bind the T-cell to specific target cells.

2.6 **"Improvements"** means any invention or discovery whether or not patentable which is used commercially by Xcyte during the term of this Agreement and which directly relates to the methods of preparing T-cells claimed in the Patents, and is within the scope thereof. It is understood and agreed that any ligand (including, without limitation, any antibody or antibody derivative) identified or used by Xcyte or its designees for the practice of the methods claimed in the Patents shall not be an Improvement.

2.7 **"License Agreements"** means the 1995 Acquisition Agreement between GI and Repligen Corporation, together with the following agreements, pursuant to which GI licensed the Patents which are sublicensed to Xcyte under this Agreement:

(a) **"Navy Agreement"** means the December 10, 1996 License Agreement between GI and the Navy, a copy of which is attached as **Exhibit A** to this Agreement.

(b) **"Michigan Agreement"** means the May 28, 1992 License Agreement between GI and Michigan, a copy of which is attached as **Exhibit B** to this Agreement

(c) **"DFCI Agreement"** means the July 20, 1993 License Agreement between DFCI and Repligen, a copy of which is attached as **Exhibit C** to this Agreement.

2.8 **"Licensors"** means the United States of America, represented by the Secretary of the Navy (the "Navy"), the University of Michigan ("Michigan") and the Dana Farber Cancer Institute ("DFCI").

2.9 **"Net Sales"** means the aggregate United States dollar equivalent of gross revenues derived by or payable to Xcyte, its Affiliates and Sublicensees from or on account of the sale or distribution of Products (including Combination Products) and Services to third parties, less (a) reasonable credits or allowances, if any, actually granted on account of price adjustments, rebates, discounts, recalls, rejection or return of items previously sold, (b) excises, sales taxes, value added taxes, consumption taxes, duties or other taxes imposed upon and paid with respect to such sales or Services (excluding income or franchise taxes of any kind) and (c) separately itemized insurance, packaging and transportation costs incurred in shipping Products (including Combination Products) to such third parties. No deduction shall be made for any item of cost incurred by Xcyte, its Affiliates or Sublicensees in preparing, manufacturing, shipping or selling Products (including Combination Products) except as permitted pursuant to clauses (a), (b) and (c) of the foregoing sentence. Net Sales shall not include any transfer between Xcyte and any of its Affiliates or Sublicensees for resale.

If Xcyte or an Affiliate or Sublicensee sells Products (including Combination Products) to a Distributor, Net Sales shall be calculated from the gross revenues received by Xcyte and/or its Affiliate or Sublicensee from the sale of Products to the Distributor.

In the event that Xcyte or any of its Affiliates or Sublicensees shall make any transfer of Products (including Combination Products) to third parties for other than monetary value, such transfer shall be considered a sale hereunder for accounting and royalty purposes. Net Sales for any such transfers shall be determined on a country-by-country basis and shall be the average price of "arms length" sales by Xcyte, its Affiliates or Sublicensees in such country during the royalty reporting period in which such transfer occurs or, if no such "arms length" sales occurred in such country during such period, during the last period in which such "arms length" sales occurred. If no "arms length" sales have occurred in a particular country, Net Sales for any such transfer in such country shall be the average price of arms length" sales in all countries in the Territory.

Notwithstanding the foregoing, no transfer of Products (including Combination Products) for testing, pre-clinical, clinical or developmental purposes or as samples shall be considered a sale hereunder.

In the event a Product or Combination Product is sold to end-users together with a Service, in calculating Net Sales the payment received by Xcyte for such Service component shall be included in Net Sales, subject to Section 5.2(b); provided, any payment received by Xcyte for any service which is not a Service shall not be included in Net Sales.

2.10 **"Party"** means GI or Xcyte; "Parties" means GI and Xcyte.

2.11 **"Patents"** means the patents and patent applications listed in **Exhibit D** attached to this Agreement and shall include any foreign counterparts of the patents and patent applications listed in **Exhibit D** (which for all purposes of this Agreement shall be deemed to include certificates of invention anti applications for certificates of invention and priority rights), together with any reissues extensions or other governmental acts which effectively extend the period of exclusivity by the patent holder, substitutions, confirmations, registrations, revalidations, additions, continuations, continuations-in-pan, or divisions of or to any of the foregoing, to the extent GI owns or controls such rights, or has acquired or licensed such rights under the License Agreements.

2.12 **"Product"** means any product developed by or on behalf of Xcyte, the manufacture, use or sale of which is covered by a Valid Claim of the Patents in the country of manufacture, use or sale.

2.13 **"Service"** means any service provided by Xcyte in connection with a Product in the Field. By way of illustration and without limitation, services would include apheresis conducted in connection with the use of a Product or services relating to cell testing or cell characterization or quality assurance or quality control of Products.

2.14 **"Sublicensee"** means a third party, including any Xcyte Affiliate, to which Xcyte has granted a further sublicense to make, use, import, offer for sale and/or sell the Products.

2.15 **"Technology"** means the technology described in the Patents related to the manufacture, use or sale of the Products in the Field.

2.16 **"Territory"** means, with respect to each Patent, the area of the world in which GI has the rights to practice under such Patent, as set forth in applicable License Agreement under which GI obtained rights to such Patent.

2.17 **"Valid Claim"** means (a) a claim of an unexpired patent which shall not have been withdrawn, canceled or disclaimed, nor held invalid or unenforceable by a court of competent jurisdiction in an unappealed or unappealable decision or (b) a claim of a patent application which is either: (i) the subject of a pending patent interference proceeding or (ii) supported by the disclosure of such application or any prior filed patent application for a cumulative period not exceeding seven (7) years from the earliest date of such supporting disclosure for such claim in any such patent application.

3. License from GI to Xcyte.

3.1 **Grant.** Subject to the fulfillment of the terms and conditions of this Agreement, including, without limitation, the conditions of sublicense set forth in Section 3.4, below, GI grants to Xcyte exclusive, royalty-bearing licenses and/or sublicenses

under the Patents, restricted to the Field, to make and have made, to use, to offer for sale, to sell and have sold, to import and have imported, and to export and have exported, the Products in the Territory.

3.2 **Term.** The licenses and/or sublicenses granted in Section 3.1, above, shall run to the end of the enforceable term of the Patents or License Agreements under which such license and/or sublicense is granted.

3.3 **Further Sublicenses.** Xcyte shall have the right to grant further sublicenses under the foregoing license and/or sublicense, provided the Sublicensees agree to comply with all terms and conditions of this Agreement. Notwithstanding any such further sublicenses, Xcyte shall remain primarily liable for all of such Affiliates' and Sublicensees' duties and obligations contained in this Agreement.

3.4 **Conditions of Sublicense.** With respect to the applicable Patents or the applicable claim or claims of such Patents, the sublicenses granted to Xcyte under this Agreement are subject to thc following conditions imposed on GI, as licensee, and Xcyte, as sublicensee, by the applicable Licensors:

(a) **Approval of Licensors.** Each such sublicense shall be subject to the prior written approval of the applicable Licensor to the extent required by the License Agreements.

(b) **Licensors' Retained Rights.** Each sublicense is subject to any and all rights retained by the applicable Licensor.

(c) **Consistent with Terms of License Agreements.** Each sublicense is granted pursuant to the terms of the applicable License Agreement. No provision of this Agreement shall be in derogation of or diminish any rights of each Licensor in the applicable License Agreement. Each sublicense under this Agreement may be modified or terminated in whole or in part upon the modification or termination in whole or in part of the applicable License Agreement; provided, GI shall not terminate or enter into any modification of any of the License Agreements if such modification or termination would affect the rights of Xcyte under this Agreement, without the prior written consent of Xcyte, and shall notify Xcyte within ten (10) business days if GI receives any notice from any Licensor that (i) such Licensor believes that GI is in default or breach of the relevant License Agreement, or (ii) such Licensor intends to terminate the relevant License Agreement, or (iii) such Licensor intends to modify GI's rights under the applicable License Agreement (e.g., by converting GI's exclusive rights under such License Agreement to non-exclusive rights). Should any sublicense granted by Xcyte under this Agreement not comply with the requirements of any License Agreement, such sublicense of rights under this Agreement may be void. If either Party becomes aware of any potential inconsistency of a sublicense granted by Xcyte with this

Agreement, it shall promptly notify the other Party, providing a detailed explanation of the potential inconsistency.

(d) **GI to Furnish Copy.** Within thirty (30) days of the Effective Date, and within thirty (30) days of any modification of this Agreement, GI may be obligated to furnish to each Licensor a true and complete copy of this Agreement and any modification hereof.

4. Product Development.

4.1 **Diligence Obligations.** Xcyte shall exercise commercially reasonable and diligent efforts, in its scientific and business judgement, to develop at least one Product itself or through sublicensees. Each year during the term of the Agreement until the first commercial sale of a Product, Xcyte, itself or through a sublicensee, shall expend no less than five hundred thousand dollars ($500,000) annually on research and development activities directly relaxing to Product development. During the term of this Agreement, within sixty (60) days of each anniversary of the Effective Date, Xcyte shall issue to GI a progress report detailing Xcyte's progress in developing Products.

4.2 **Conversion of License and/or Sublicense.** In the event that Xcyte fails to satisfy the requirements set forth in Section 4.1, above, GI shall have the right, in its sole discretion, upon written notice to Xcyte, to convert the licenses and/or sublicenses granted to Xcyte under this Agreement from exclusive to non-exclusive; provided Xcyte has not cured such failure within sixty (60) days following written notice from GI of any such failure. In the event that GI converts such licenses and/or sublicense to non-exclusive, GI shall be entitled to grant additional licenses and/or sublicenses under the Patents to not more than two (2) unrelated third parties. If GI exercises its conversion right under this Section 4.2, thereafter the royalty obligation due to GI pursuant to Section 5.2 below shall be reduced by **[*]** but in no event shall be less than **[*]** of Net Sales of Product or Combination Product.

5. Consideration.

5.1 **License Fee.** In partial consideration for the license granted herein, on the Effective Date Xcyte shall pay to GI a license fee in the form of 145,875 shares of Xcyte preferred stock, subject to the terms and conditions of the Stock Purchase Agreement attached hereto as Exhibit E, and shall pay a total of fifty three thousand four hundred eighty seven U.S. dollars and fifty cents ($53,487.50) to the Licensors as provided in the Letter Agreement of even date herewith between GI, Xcyte and the Licensors. In addition, upon the first to occur of (i) notice from GI to Xcyte of the issuance of the first Valid Claim within the Patents, (ii) the first grant of a sublicense by Xcyte to a third party pursuant to Section 3.3, or (iii) the third anniversary of the Effective Date, GI shall have the right to purchase 194,500 additional shares of Xcyte stock, subject to the terms and conditions of the Stock Warrant Agreement attached hereto as Exhibit F.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

5.2 Royalty Payments.

(a) With respect to the sales of each Product, Xcyte shall pay GI a royalty of **[*]** of Net Sales of Products sold by Xcyte, its Affiliates and Sublicensees without any Services.

(b) With respect to the sales of each Product, Xcyte shall pay GI a royalty of **[*]** of Net Sales of Products by Xcyte, its Affiliates and Sublicensees sold together with one or more Services.

(c) With respect to the sales of each Combination Product, Xcyte shall pay GI a royalty of such Combination Product, as follows:

(i) **[*]** of Net Sales of each Combination Product sold by Xcyte, its Affiliates and Sublicensees, if such Combination Product is sold without any Services, and

(ii) **[*]** of Net Sales of each Combination Product sold by Xcyte, its Affiliates and Sublicensees, if such Combination Product is sold together with one or more Services;

provided, in each case, in determining Net Sales of Combination Products, Net Sales shall first be calculated in accordance with the definition of Net Sales and then multiplied by a fraction, the numerator of which is the current Net Selling Price of Product and the denominator of which is the current Net Selling Price of the Combination Product. If there is no Net Selling Price of Product, then the numerator shall be the fair market value of the Product for the quantity contained in the Combination Product and of the same class, purity and potency, as negotiated in good faith by the parties, or, failing such agreement, as is determined by an appraisal to be conducted by an independent third party mutually agreed to by Xcyte and GI, which determination shall be binding. However, in no event shall the royalty be less than **[*]** of Net Sales of each Combination Product.

(d) In addition to the royalties payable under this Section 5.2, Xcyte shall pay to GI a portion of all compensation, including license fees, advances and other payments of compensation (however characterized), which are owed to Xcyte pursuant to further sublicensing of the rights granted to Xcyte hereunder, as follows:

Sublicense Date	% of Compensation
Within 24 months of Effective Date	[*]
After 24 months after Effective Date	[*]

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Notwithstanding the above, it is understood and agreed that Xcyte shall not be obligated to pay to GI any portion of any amounts received from any Sublicensee as payments for research and development activities to be conducted by Xcyte on behalf of such Sublicensee, or amounts received from a Sublicensee for equity, or the license or sublicense of any intellectual property other than the Patents, or products other than the Products, or reimbursement for patent or other expenses.

(e) Xcyte and its Affiliates and Sublicensees shall be responsible for any payments due to third parties under licenses or similar agreements entered by Xcyte or its Affiliates or Sublicensees necessary for the manufacture, use or sale of Products. Xcyte may offset one-half of any such payments made by Xcyte or its Affiliates or Sublicensees to third parties against royalties due GI pursuant to Section 5.2(a), (b) and (c) above; provided, GI shall have the right to receive the greater of (i) **[*]** the amounts due pursuant to Sections 5.2(a), (b) and (c) above, or (ii) **[*]** of Net Sales of Product or Combination Product.

(f) Payments due under this Section 5.2 shall be payable on a country-by-country and Product-by-Product basis and shall be payable until (i) with respect to Patents owned by GI, the expiration of the last-to-expire Valid Claim, and (ii) with respect to Patents subject to the License Agreements, the expiration of the applicable license term, as set forth in Section 3.2.

(g) Regardless of any credits or offsets available to Xcyte under Section 5.2(e) of this Agreement commencing on the first anniversary of the Launch of the first Product in any country, in no year shall Xcyte pay to GI less than the greater of (i) **[*]** of the royalties due pursuant to Sections 5.2(a), (b) or (c) in any year with regard to any Product or (ii) **[*]** of Net Sales of Product or Combination Product. Any credits or offsets not creditable against royalties in the year such credit or offset is earned may be carried forward until fully applied.

5.3 **Reports and Payment.** Xcyte shall deliver to GI, within sixty (60) days after the end of each calendar quarter, a written report showing its computation of royalties due under this Agreement upon Net Sales by Xcyte, its Affiliates and Sublicensees during such calendar quarter. All Net Sales shall be segmented in each such report according to sales by Xcyte, each Affiliate and each Sublicensee, as well as on a country-by-country basis, including the rates of exchange used to convert such royalties to United States Dollars from the currency in which such sales were made. Subject to the provisions of Sections 5.4 and 5.5 of this Agreement, simultaneously with the delivery of each such report, Xcyte shall tender payment in United States Dollars of all royalties shown to be due therein.

For purposes hereof, the rates of exchange to be used for converting royalties hereunder to United States Dollars shall be the closing price published for the

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

purchase of United States Dollars in the East Coast Edition of the Wall Street Journal for the last business day of the calendar quarter for which payment is due.

5.4 **Foreign Royalties.** Where royalties are due hereunder for sales of Products in a country where, by reason of currency regulations or taxes of any kind, it is impossible or illegal for Xcyte, any Affiliate or Sublicensee to transfer royalty payments to GI for Net Sales in that country, such royalties shall be deposited in whatever currency is allowable by the person or entity not able to make the transfer for the benefit or credit of GI in an accredited bank in that country that is reasonably acceptable to GI.

5.5 **Taxes.** Any and all income or similar taxes imposed or levied on account of the receipt of royalties payable under this Agreement which are required to be withheld by Xcyte shall be paid by Xcyte, its Affiliates or Sublicensees on behalf of GI and shall be paid to the proper taxing authority. Proof of payment shall be secured and sent to GI by Xcyte, its Affiliates or Sublicensees as evidence of such payment in such form as required by the tax authorities having jurisdiction over Xcyte, its Affiliates or Sublicensees. Such taxes shall be deducted from the royalty that would otherwise be remittable by Xcyte, its Affiliates or Sublicensees.

5.6 **Records.** Xcyte shall keep, and shall require all Affiliates and Sublicensees to keep, for a period of at least two (2) years, full, true and accurate books of accounts and other records containing all information and data which may be necessary to ascertain and verify the royalties payable hereunder. During the term of this Agreement and for a period of two (2) years following its termination, GI shall have the right from time to time (not to exceed once during each calendar year) to inspect in confidence, or have an agent, accountant or other representative inspect in confidence, such books, records and supporting data.

6. **Representation, Warranty and Indemnity.**

6.1 **Representation and Warranty of GI.** GI represents and warrants to Xcyte that, subject to the terms and conditions of this Agreement and the License Agreements, (i) it has an interest licensable or sublicensable to Xcyte in the Patents; (ii) it has full right, power and authority to grant the licenses and / sublicense granted by it under this Agreement; (iii) GI has not previously granted, and will not grant during the term of this Agreement, any right, license or interest in and to the Patents, or any portion thereof, inconsistent with the license granted to Xcyte herein; (iv) as of the Effective Date, there are no actions, suits, investigations, claims or proceedings pending or threatened in any way relating to the Patents except as set forth on Schedule 6.1 to this Agreement; and (v) during the term of this Agreement, GI shall use its reasonable efforts not to breach any of the License Agreements.

6.2 **Representation and Warranty of Xcyte.** Xcyte represents and warrants to GI that, subject to the terms and conditions of this Agreement and the License

Agreements, during the term of this Agreement, Xcyte shall use its reasonable efforts not to breach any of the License Agreements.

6.3 **Indemnity of GI by Xcyte.** Xcyte shall defend, indemnify and hold GI (and its agents, directors, officers and employees) harmless, at Xcyte's cost and expense, from and against any and all losses, costs, liabilities, damages, fees and expenses, including reasonable attorneys' fees and expenses (collectively, "Liabilities") arising out of or in connection with the manufacture, promotion, sale or other disposition of the Products by Xcyte, its Affiliates and Sublicensees, and any actual or alleged injury, damage, death or other consequence occurring to any third person as a result, directly or indirectly, of the possession, consumption or use of the Products sold by Xcyte or its Affiliates or Sublicensees, regardless of the form in which any such claim is made.

6.4 **Effect of Representations and Warranties.** It is understood that if the representations and warranties made by a party under this Article 6 are not true and accurate, the party making such representations and warranties shall indemnify and hold the other party harmless from and against any Liabilities incurred as a result.

6.5 **Exclusion.** IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER PARTY, OR ANY OF ITS OFFICERS, DIRECTORS, SHAREHOLDERS, EMPLOYEES OR AGENTS, OR ANY OTHER PERSON OR ENTITY, FOR ANY INCIDENTAL, CONSEQUENTIAL, OR OTHER SPECIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST PROFITS OR OPPORTUNITIES INCURRED BY SUCH PARTY, OR ANY OTHER PERSON OR ENTITY, ARISING OUT OF OR RELATING TO THIS AGREEMENT, THE LICENSES AND RIGHTS GRANTED HEREIN, THE PRODUCT, PATENTS OR IMPROVEMENTS, OR ACTUAL OR ALLEGED NEGLIGENCE, STRICT LIABILITY, BREACH OF REPRESENTATIONS OR WARRANTIES, OR ANY OTHER CAUSE OF ACTION.

6.6 **Procedure.** A party entitled to indemnification hereunder agrees to give prompt written notice to the indemnifying party after the receipt by such party of any written notice of the commencement of any action, suit, proceeding or investigation or threat thereof made in writing for which such party will claim indemnification pursuant to this Agreement. Unless, in the reasonable judgment of the indemnified party, a conflict of interest may exist between the indemnified party and the indemnifying party with respect to a claim, the indemnifying party may assume the defense of such claim with counsel reasonably satisfactory to the indemnified party. if the indemnifying party is not entitled to, or elects not to, assume the defense of a claim, it will not be obligated to pay the fees and expenses of more than one counsel with respect to such claim. The indemnifying party will not be subject to any liability for any settlement made without its consent, which consent shall not be unreasonably withheld or delayed.

7. Intellectual Property.

7.1 Improvements. Xcyte shall own the entire right, title and interest in and to all Improvements.

7.2 Option; Right of First Refusal. Xcyte grants to GI an option to execute an exclusive, worldwide, royalty-bearing commercialization license, with the right to grant sublicenses, to the Improvements, to commercialize products based on or incorporating Improvements outside the Field, on terms to be negotiated by the parties in good faith.

GI may exercise its option by written notice to Xcyte within three (3) months of notice by Xcyte to GI of such Improvement and receipt by GI of sufficient technical information to evaluate such Improvement. If GI exercise its option, the parties will negotiate in good faith to reach agreement on a commercialization license for up to 120 days. If GI does not exercise its option, or the parties do not reach agreement within 120 days, Xcyte may commercialize such Improvement outside the Field, itself or license such Improvement to a third party, without obligation to GI. Before entering into any transaction with a third party on terms which, taken as a whole, are materially more favorable than those offered to GI in writing to license such Improvement, Xcyte will inform GI and shall allow GI sixty (60) days in which to elect whether to license such Improvement under all the terms of the proposed transaction with the third party. Nothing in this Section 7.2 shall imply the grant of any license under the Patents to Xcyte outside the Field.

7.3 Patent Maintenance. GI shall have the right to seek or continue to seek or maintain patent protection on the Patents in any country. GI shall obtain the advice of Xcyte concerning the countries in which to seek or maintain patent protection, and the nature and text of such patents and prosecutions matters related thereto prior to the filing thereof and provide Xcyte a reasonable opportunity to review and comment on all proposed submissions to any patent office before submittal, and provided further that GI shall keep Xcyte reasonably informed as to the status of such patent applications by promptly providing Xcyte copies of all communications relating to such patent applications that are received from any patent office. Xcyte shall reimburse GI for any reasonable expenses incurred by GI during the term of this Agreement in preparing, filing, prosecuting and maintaining any Patents containing claims relating to the Field. If GI elects not to seek or continue to seek or maintain patent protection on any patent application or patent within the Patents in any country, Xcyte shall have the right, at its expense, to file, procure and maintain in such countries such Patents. If Xcyte elects not to continue to make payments to seek or continue to seek or maintain patent protection on any patent application or patent within the Patents in any country, it may notify GI, and its obligation to make such payments shall cease and its license with regard to such patent application or patent shall terminate. Xcyte shall have the right, at Xcyte cost and expense, to audit all

expenses relating to the preparing, filing, prosecuting and maintaining of the Patents.

7.4 Patent Infringement.

(a) Each Party shall promptly report in writing to the other Party during the term of this Agreement any known infringement or suspected infringement of any of the Patents, and promptly shall provide the other Party with all available evidence supporting said infringement, suspected infringement, or unauthorized use or misappropriation.

(b) Except as provided in Section 7.4(c) below, Xcyte shall have the right to initiate an infringement or other appropriate suit anywhere in the Territory against any third party who at any time has infringed, or is suspected of infringing, any of the Patents in the Field. Xcyte shall give GI sufficient advance notice of its intent to file said suit and the reasons therefor, and shall provide GI with an opportunity to make suggestions and comments regarding such suit. Xcyte shall keep GI promptly informed, and shall from time to time consult with GI regarding the status of any such suit and shall provide GI with copies of all documents filed in, and all written communications relating to, such suit. Xcyte shall have the sole and exclusive right to select counsel for any such suit and shall, except as provided below, pay all expenses of the suit, including without limitation attorneys' fees and court costs. GI, in its sole discretion, may elect, within sixty (60) days after the commencement of such litigation, to contribute to the costs incurred by Xcyte in connection with such litigation and, if it so elects, any damages, royalties, settlement fees or other consideration received by Xcyte or any of its Affiliates for infringement as a result of such litigation shall be shared by Xcyte and GI pro rata based on their respective sharing of the costs of such litigation. In the event that GI elects not to contribute to the costs of such litigation, Xcyte and/or its Sublicensees shall be entitled to retain any damages, royalties, settlement fees or other consideration for infringement resulting therefrom. If necessary, GI shall join as a party to the suit but shall be under no obligation to participate except to the extent that such participation is required as the result of being a named party to the suit. GI shall offer reasonable assistance to Xcyte in connection therewith at no charge to Xcyte except for reimbursement of reasonable out-of-pocket expenses, incurred in rendering such assistance. GI shall have the right to participate and be represented in any such suit by its own counsel at its own expense.

(c) In the event that Xcyte elects not to initiate an infringement or other appropriate suit pursuant to Section 7.4(b) above, Xcyte shall promptly advise GI of its intent not to initiate such suit, and GI shall have the right, at the expense of GI, of initiating an infringement or other appropriate suit against any third party who at any time has infringed, or is suspected of

infringing, any of the Patents in the Field. GI shall have the sole and exclusive right to select counsel for any such suit and shall, except as provided below, pay all expenses of the suit including without limitation attorneys' fees and court costs. Xcyte, in its sole discretion, may elect, within sixty (60) days after the commencement of such litigation, to contribute to the costs incurred by GI in connection with such litigation and, if it so elects, any damages, royalties, settlement fee or other consideration received by GI or any of its Affiliates for infringement as a result of such litigation shall be shared by GI and Xcyte pro rata based on their respective sharing of the costs of such litigation. In the event that Xcyte elects not to contribute to the costs of such litigation, GI and/or its Affiliates shall be entitled to retain any damages, royalties, settlement fees or other consideration for infringement resulting therefrom. If necessary, Xcyte shall join as a party to the suit but shall be under no obligation to participate except to the extent that such participation is required as a result of being a named party to the suit. At GI's request, Xcyte shall offer reasonable assistance to GI in connection therewith at no charge to GI except for reimbursement of reasonable out-of-pocket expenses incurred in rendering such assistance. Xcyte shall have the right to participate and be represented in any such suit by its own counsel at its own expense.

7.5 Claimed Infringement.

(a) In the event that a third party at any time provides written notice of a claim to, or brings an action, suit, or proceeding against, either Party or any of their respective Affiliates or Sublicensees, claiming infringement of its patent rights or unauthorized use or misappropriation of its know-how, based upon an assertion or claim arising out of the development, use, manufacture, distribution, or sale of Products, such Party shall promptly notify the other Party of the claim or the commencement of such action, suit, or proceeding, enclosing a copy of the claim and/or all papers served. Each Party agrees to make available to the other Party its advice and counsel regarding the technical merits of any such claim at no cost to the other Party.

(b) THE FOREGOING STATES THE ENTIRE RESPONSIBILITY OF THE PARTIES IN THE CASE OF ANY CLAIMED INFRINGEMENT OR VIOLATION OF ANY THIRD PARTY'S RIGHTS OR UNAUTHORIZED USE OR MISAPPROPRIATION OF ANY THIRD PARTY'S KNOW-HOW.

8. Confidential Information.

8.1 Nondisclosure of Confidential Information. Each Party shall not directly or indirectly publish, disseminate or otherwise disclose, deliver or make available to any person outside its organization any of the other Party's Confidential

information. Each Party may disclose the other Party's Confidential Information to persons within its organization and to its Affiliates and Sublicensees who/which have a need to receive such Confidential Information in order to further the purposes of this Agreement and who/which are bound to protect the confidentiality of such Confidential Information, as set forth in Section 8.4 below. Each Party may disclose the other Party's Confidential Information to a governmental authority or by order of a court of competent jurisdiction, provided that such disclosure is subject to all applicable governmental or judicial protection available for like material and reasonable advance notice is given to the other Party.

8.2 **Use of Confidential Information.** Each Party shall use the other Party's Confidential Information solely for the purposes contemplated in this Agreement or for such other purposes as may be agreed upon by the Parties in writing.

8.3 **Physical Protection of Confidential Information.** The Parties shall exercise commercially reasonable precautions to physically protect the integrity and confidentiality of the other Party's Confidential Information.

8.4 **Agreements with Personnel and Third Parties.** The Parties have or shall obtain agreements with all personnel and third parties who will have access to the other Party's Confidential Information which impose comparable confidentiality obligations as are set forth in this Agreement on such personnel and third parties.

9. Term and Termination.

9.1 **Term.** Unless sooner terminated in accordance with the provisions of this Section 9, this Agreement shall continue in force on a country-by-country and Product-by-Product basis for the period set forth in Section 3.2.

9.2 **Termination for Breach.** Each Party shall be entitled to terminate this Agreement by written notice to the other party in the event that the other party shall be in default of any of its material obligations hereunder, and shall fail to remedy any such default within sixty (60) days after notice thereof by the non-breaching party. Any such notice shall specifically state that the non-breaching party intends to terminate this Agreement in the event that the breaching party shall fail to remedy the default.

9.3 **Permissive Termination.** Xcyte may terminate this Agreement with thirty (30) days notice to GI.

9.4 **Effect of Termination.**

(a) **Accrued Obligations.** Termination of this Agreement for any reason shall not release any Party hereto from any liability which, at the time of such termination, has already accrued to the other Party or which is attributable to such termination, nor shall it preclude either Party from

pursuing all rights and remedies it may have hereunder or at law or in equity with respect to any breach of this Agreement.

(b) **Return of Confidential Information.** Subject to any license granted pursuant to Section 7.2, upon any termination of this Agreement each Party shall return to the other Party all Confidential Information received from the other Party (except one copy of which may be retained for archival purposes), and neither Party shall use any such Confidential Information of the other Party for any purpose.

(c) **Stock on Hand.** In the event this Agreement is terminated for any reason, Xcyte, its Affiliates and its Sublicensees shall have the right for six (6) months following the date of termination to sell or otherwise dispose of the stock of any Licensed Product subject to this Agreement then on hand, subject to the right of GI to receive payment thereon as provided in Section 5.

9.5 **Survival of Obligations.** Notwithstanding any termination of this Agreement, the obligations of the Parties under Sections 5.3, 5.6, 6,7.1, 8,9.4, 9.5 and 10 shall survive and continue to be enforceable.

10. Miscellaneous.

10.1 **Publicity.** Neither Party shall originate any publicity, news release or other public announcement, written or oral, relating to this Agreement or the existence of an arrangement between the Parties, without the prior written approval of the other Party, which approval shall not be unreasonably withheld, except as otherwise required by law. It is expressly understood that nothing in this Section 10.1 shall prevent a Party from making a disclosure in connection with any required filings with the Securities and Exchange Commission or in connection with the offering of securities or any financing.

10.2 **Export Control.** The Parties acknowledge that the export of technical data, materials, or products is subject to the exporting Party receiving the necessary export licenses and that the Parties cannot be responsible for any delays attributable to export controls which are beyond the reasonable control of either Party. The Parties agree that regardless of any disclosure made by the Party receiving an export of an ultimate destination of any technical data, materials, or products, the receiving Party will not reexport either directly or indirectly, any technical data, material, or products without first obtaining the applicable validated or general license from the United States Department of Commerce, United States Food and Drug Administration, and/or any other agency or department of the United States Government, as required. The receiving Party shall provide the exporting Party with any information, materials, certifications, or other documents which may be reasonably required in connection with such exports under the Export Administration Act of 1979, as amended, its rules and

regulations, the Federal Food, Drug and Cosmetic Act, and other applicable export laws.

10.3 **No Implied Licenses.** Only the licenses granted pursuant to the express terms of this Agreement shall be of any legal force and effect. No license tights shall be created by implication or estoppel.

10.4 **No Agency.** Nothing herein shall be deemed to constitute either Party as the agent or representative of the other Party, or both Parties as joint venturers or partners for any purpose. Each Party shall be an independent contractor, not an employee or partner of the other Party, and the manner in which each Party renders its services under this Agreement shall be within its sole discretion. Neither Party shall be responsible for the acts or omissions of the other Party, and neither Party will have authority to speak for, represent or obligate the other Party in any way without prior written authority from the other Party.

10.5 **Notice.** All notices required under this Agreement to be given by one Party to the other shall be in writing and shall be given by addressing the same to the other at the address or facsimile number set forth below, or at such other address or facsimile number as either may specify in writing to the other. All notices shall become effective when deposited in the United States Mail with proper postage for first class registered or certified mail prepaid, return receipt requested, or when delivered personally, or, if promptly confirmed by mail as provided above, when dispatched by facsimile.

GI: Genetics Institute, Inc.
87 Cambridge Park Drive
Cambridge, Massachusetts 02140
Telecopier (617) 876-5851
Attn: Legal Department

Xcyte: Xcyte Therapies, Inc.
2203 Airport Way South
Suite 300
Seattle, Washington 98134
Telecopier (206) 328-7316
Attn: President and CEO

10.6 **Assignment.** This Agreement, and the rights and obligations hereunder, may not be assigned or transferred, in whole or in part, by either Party without the prior written consent of the other Party, except that neither Party shall require the other Party's consent to assign this Agreement to any Affiliate, or to any entity acquiring such Party or substantially all of the assets of such Party as to which this Agreement relates whether by sale, operation of law or otherwise, or to any successor entity of such Party as the result of a merger or consolidation.

10.7 **Entire Agreement.** This Agreement constitutes the entire agreement of the Parties with regard to its subject matter, and supersedes all previous written or oral representations, agreements and understandings between the Parties.

10.8 **No Modification.** This Agreement may be changed only by a writing signed by the Parties.

10.9 **Headings.** The headings contained in this Agreement are for convenience of reference only and shall not be considered in construing this Agreement.

10.10 **Waiver.** The waiver by either Party of a breach or a default of any provision of this Agreement by the other Party shall not be construed as a waiver of any succeeding breach of the same or any other provision, nor shall any delay or omission on the part of either Party to exercise or avail itself of any right, power or privilege that it has or may have hereunder operate as a waiver of any right, power, or privilege by such Party.

10.11 **Severability.** In the event that any one or more of the provisions contained in this Agreement shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement, and all other provisions shall remain in full force and effect. If any of the provisions of this Agreement is held to be excessively broad or invalid, illegal or unenforceable in any jurisdiction, it shall be reformed and construed by limiting and reducing it so as to be enforceable to the maximum extent permitted by law in conformance with its original intent. In the event that after such reformation, a Party's rights or obligations are materially changed, then such Party may terminate this Agreement.

10.12 **Force Majeure.** Any delays in or failures of performance by either party under this Agreement shall not be considered a breach of this Agreement if and to the extent caused by occurrences beyond the reasonable control of the party affected, including but not limited to: acts of God, acts, regulations or laws of any government; strikes or other concerted acts of workers; fires; earthquakes; floods; explosions; riots; wars; rebellion; and sabotage. Any time for performance imposed hereunder shall be extended by the actual time of delay caused by any such occurrence.

10.13 **LIMITATION OF LIABILITY.** NEITHER. PARTY SHALL BE LIABLE TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES ARISING OUT OF THIS AGREEMENT, HOWEVER CAUSED, UNDER ANY THEORY OF LIABILITY.

10.14 **Successors and Assigns.** This Agreement shall be binding upon and inure to the benefit of the Parties hereto and their successors and permitted assigns.

10.15 **Counterparts.** This Agreement may be executed in any number of counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

10.16 **Applicable Law.** This Agreement shall in all events and for all purposes be governed by, and construed in accordance with, the law of The Commonwealth of Massachusetts without regard to any choice of law principle that would dictate the application of the law of another jurisdiction.

10.17 **HSR.** Xcyte represents and warrants that neither Xcyte nor any ultimate parent entity of Xcyte has $10 million in sales or total assets and therefore does not meet the size of person test under Title II of the Hart-Scott-Rodino Antitrust Improvements Act of 1976 and the regulations promulgated thereunder.

IN WITNESS WHEREOF, duly-authorized representatives of the Parties have signed this Agreement as a document under seal as of the Effective Date.

GENETICS INSTITUTE, INC.

By /s/ Egon E. Berg

Print Name

Title

XCYTE THERAPIES, INC.

By /s/ Ronald Jay Berenson

Print Name Ronald Jay Berenson

Title President & CEO

Exhibit A

Navy Agreement

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [*]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

EXCLUSIVE LICENSE

Between

GENETICS INSTITUTE, INC.

And

UNITED STATES OF AMERICA

As Represented By

THE SECRETARY OF THE NAVY

TABLE OF CONTENTS

PREAMBLE

This exclusive license (hereinafter called “LICENSE”) is made and entered into by and between the United States of America as represented by the Secretary of the Navy (hereinafter called “LICENSOR”) and Genetics Institute, Inc., a Delaware corporation (hereinafter called. “LICENSEE”) having an address at 87 CambridgePark Drive, Cambridge, Massachusetts 02140.

WITNESSETH:

WHEREAS LICENSOR and Repligen Corporation. (“REPLIGEN”) are parties to a Cooperative Research and Development Agreement effective December 20, 1991, as subsequently amended by REPLIGEN and LICENSOR from time to time (the “CRADA”);

WHEREAS LICENSEE and REPLIGEN are parties to a September 1, 1995 Asset Acquisition. Agreement, pursuant to which LICENSEE acquired certain of REPLIGEN’s tangible assets, intellectual property and contractual rights related to REPLIGEN’ s immune modulation business, and thereafter, LICENSEE became REPLIGEN’s successor-in-interest to such immune modulation business;

WHEREAS a portion of the assets, intellectual property and contractual rights acquired by LICENSEE from REPLIGEN included REPLIGEN’s rights under the CRADA;

WHEREAS LICENSEE informed LICENSOR of its acquisition of said REPLIGEN rights pursuant to an October 16, 1995 letter, a copy of which is attached to this LICENSE as SCHEDULE A; and LICENSOR has consented to the substitution of LICENSEE for REPLIGEN under the CRADA;

WHEREAS LICENSOR has consented to LICENSEE’S exercise of its option under the CRADA to obtain an exclusive license to certain patent applications filed by LICENSOR (more fully defined below as the “LICENSED PATENTS”); .

WHEREAS Title 35 of the United States Code, Section 207, authorizes Federal agencies to license their patents;

WHEREAS Title 37 of the Code of Federal Regulations, Chapter IV, Part 404 entitled “Licensing of Government Owned Inventions” sets forth the terms and conditions under which licenses may be granted;

WHEREAS the above-cited authorities provide that licensing of Government inventions will best serve the interests of the Federal Government and the public when utilization of such inventions is promoted and such inventions are brought to practical application;

WHEREAS LICENSOR has an assignment of an undivided ownership interest in the inventions disclosed, and claimed in the LICENSED PATENTS;

WHEREAS LICENSEE has supplied LICENSOR with a plan for development and marketing of these inventions and has expressed its intention to carry out this plan upon the granting of this LICENSE;

WHEREAS LICENSEE has agreed that any products embodying these inventions or produced through the use of these inventions for use or sale in the United States will be manufactured substantially in the United States;

WHEREAS LICENSOR has determined that:

(A) The interest of the Federal Government and the public will best be served by the proposed license, in view of the LICENSEE's intentions, plans, and ability to bring the inventions described and claimed, in the LICENSED PATENTS to practical application or otherwise promote the inventions' utilization by the public;

(B) The desired practical application has not been achieved, or is not likely expeditiously to be achieved, under any non-exclusive license which has been granted, or which may be granted, on the inventions;

(C) Exclusive licensing is a reasonable and necessary incentive to call forth the investment of risk capital and expenditures to bring the inventions to practical application or otherwise promote the inventions' utilization by the public;

(D) The proposed terms and scope of exclusivity are not greater than reasonably necessary to provide the incentive for bringing the inventions to practical application or otherwise promote the inventions utilization by the public;

WHEREAS LICENSOR has not determined that the grant of this LICENSE will tend substantially to lessen competition or result in undue concentration in any Section of the country in any line of commerce to which the technology to be licensed relates or to create or maintain other situations inconsistent with the antitrust laws; and

WHEREAS LICENSOR has considered the capabilities of LICENSEE to bring the inventions to practical application and' has found that the LICENSEE is a responsible party for negotiating this LICENSE on terms and conditions most favorable to the public interest and that to grant this exclusive LICENSE would be in the public interest;

NOW, THEREFORE, in accordance with and to the extent provided by the aforementioned authorities and in consideration of the foregoing premises and of the covenants and obligations hereinafter set forth to be well and truly performed, and other good and valuable consideration, the parties hereto agree to the foregoing and as follows:

ARTICLE I.
Definitions

The following definitions shall apply to the defined words where such words are used in this LICENSE:

a. “LICENSED PATENTS” means all patents and patent applications listed on SCHEDULE B to this LICENSE (which for all purposes of this Agreement shall be deemed to include certificates of invention and applications for certificates of invention and priority rights), together with any reissues, extensions or other governmental acts which effectively extend the period of exclusivity by the patent holder, substitutions, confirmations, registrations,, revalidations, additions, continuations, continuations-in-part (to the extent a claim is entitled to the benefit of one or more prior applications), or divisions of or to any of the foregoing;

b. “LICENSED INVENTIONS” means the inventions claimed in the LICENSED PATENTS;

c. To “practice the LICENSED INVENTIONS” means to make, use and sell by or on behalf of LICENSEE or otherwise dispose of according to law any machine, article of manufacture or composition of matter physically embodying or made according to LICENSED INVENTIONS;

d. “PRACTICAL APPLICATION” means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system, and, in each case under such conditions as to establish that these LICENSED INVENTIONS are being utilized and that their benefits are to the extent permitted by law and Government regulations available to the public on reasonable terms;

e. A “ROYALTY-BEARING PRODUCT” means any product defined by a VALID CLAIM of the LICENSED PATENTS or made by a method claimed in a VALID CLAIM of, the LICENSED PATENTS;

f. The “NET SELLING PRICE” shall mean the invoice price of a ROYALTY-BEARING PRODUCT sold and not returned. A ROYALTY-BEARING PRODUCT will be considered to be sold when shipped or delivered to a customer. If a ROYALTY-BEARING PRODUCT is sold as part of a unit, system, package or combination product, the NET SELLING PRICE, for purposes of calculating the royalty shall be calculated by multiplying the NET SELLING PRICE of the combination product by the fraction A/ (A+B) where “A” is the average unit sales price of the ROYALTY-BEARING PRODUCT when sold separately and “B” is the average unit sale’s price of the other product or products when sold separately. If either the ROYALTY-BEARING PRODUCT or the other product or products are not sold separately, then the NET

SELLING PRICE of such ROYALTY-BEARING PRODUCTS shall be deemed to be the actual average NET SELLING PRICE per unit for independent sales of such ROYALTY-BEARING PRODUCT over e prior calendar quarter, when sold and invoiced as a separate unit. In the event the NET SELLING PRICE cannot be calculated in the manner set forth above, the PARTIES shall discuss in good faith and agree upon an alternative calculation for NET SELLING PRICE.

g. “UNITED STATES” means the United States of America, its territories and possessions, the District of Columbia, and the Commonwealth of Puerto Rico.

h. “SUBLICENSEE” means any third party, other than an AFFILIATE, to which LICENSEE has granted a sublicense pursuant to the terms of this LICENSE.

i. “VALID CLAIM” means, with respect to the manufacture, use or sale of a ROYALTY-BEARING PRODUCT, (a) a claim of an unexpired LICENSED PATENT which shall not have been withdrawn, canceled or disclaimed, nor held invalid or unenforceable by a court of competent jurisdiction in an unappealed or unappealable decision or (b) a claim of a patent application which is either (i) the subject of a pending patent interference proceeding or (ii) supported by the disclosure of such application or any prior filed patent application for a cumulative period not exceeding seven (7) years from the earliest date of such supporting disclosure for such claim in any such patent application.

j. “LICENSED TERRITORY” means all—countries in the world in which LICENSEE has filed a patent application, as set forth on Attachment 1 to this AGREEMENT.

k. “AFFILIATE” means any corporation, company, partnership, joint venture, firm and/or other entity which controls or is controlled by LICENSEE. For purposes of this Section, “control” means: (a) in the case of corporate entities, direct or indirect ownership of, at least fifty. percent (50%) of the stock’ or shares entitled to vote for the election of directors; and (b) in the case of non-corporate entities, direct or indirect ownership of at least fifty percent (50%) of the equity interest with the power to direct the management and policies of such noncorporate entities.

ARTICLE II.
License Grant

LICENSOR grants to LICENSEE an exclusive right and license in LICENSOR’s undivided ownership interest in the LICENSED PATENTS to practice the LICENSED INVENTIONS throughout the LICENSED TERRITORY, commencing on the date of execution of this LICENSE by LICENSOR, which shall become the effective date of the LICENSE, and ending upon the expiration of the last-to-expire of the LICENSED PATENTS which cover such LICENSED INVENTIONS, unless the LICENSE is sooner modified or terminated in whole or in part.

This LICENSE is nonassignable without written approval of LICENSOR except to the successor of that part of LICENSEE's business to which these LICENSED INVENTIONS pertain.

ARTICLE III.
LICENSEE's Performance

LICENSEE agrees to carry out the plan for development and marketing of the LICENSED INVENTIONS submitted with LICENSEE'S application for license dated June 28, 1996 to bring these LICENSED INVENTIONS to practical application as soon as commercially feasible, and LICENSEE will, thereafter, continue to make the benefits of these LICENSED INVENTIONS reasonably accessible to the public for the remainder of the period of this LICENSE.

LICENSEE agrees to spend not less than One Million Dollars ($1,000,000) per year, either internally or through AFFILIATES or SUBLICENSEES or other collaborators, on the research, development and marketing (and associated costs related thereto) of products in the [*], CTLA4 and/or B7 immune modulation area, which area includes, without limitation, the LICENSED INVENTIONS.

LICENSEE agrees that during the period of this LICENSE any products embodying these LICENSED INVENTIONS or produced through the use of the LICENSED INVENTIONS for use or sale by LICENSEE or its AFFILIATES or SUBLICENSEES in the UNITED STATES will be manufactured substantially in the UNITED STATES.

LICENSEE shall pay to the LICENSOR a non-refundable licensing fee in the amount of ONE HUNDRED THOUSAND DOLLARS ($100,000) payable, at the LICENSOR's election, either: (a) upon the execution of this LICENSE by LICENSEE or (b) at a later date during the term of this 'LICENSE, upon ninety (90) days prior written notice to LICENSEE.

LICENSEE agrees to pay to LICENSOR [*] of any sublicensing fee (other than running royalty payments or research and development reimbursements for research and/or development performed after the effective date of the applicable sublicense agreement) collected from any SUBLICENSEE. If LICENSEE is required to pay a portion of such sublicensing fee to a third party (other than the. University of Michigan ("MICHIGAN") pursuant to a May 28, 1992 License Agreement, as amended, between MICHIGAN and GI's predecessor in interest under such License Agreement, Repligen Corporation), then [*] of LICENSEE'S payments to such third party shall be deducted

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

from the portion of the sublicensing fee payable to LICENSOR. However, in no event shall LICENSOR'S share of any sublicensing fee be reduced below [*]. Payment will be made in the manner prescribed in Article IV.

LICENSEE agrees to report promptly-to LICENSOR any changes in mailing address, name or company affiliation during the period of this LICENSE and to report promptly discontinuance of LICENSEE's making the benefits of these LICENSED INVENTIONS reasonably accessible to the UNITED STATES public.

ARTICLE IV.
Royalties

LICENSEE shall pay a royalty to LICENSOR of (a) [*] of the NET SELLING PRICE for each ROYALTY-BEARING PRODUCT made, used, or sold by LICENSEE or its AFFILIATES in the LICENSED TERRITORY, where LICENSOR is the sole assignee of the LICENSED PATENT covering such ROYALTY —BEARING PRODUCT, or (b) [*] of the NET SELLING PRICE for each ROYALTY-BEARING PRODUCT made, used, or sold by LICENSEE or its AFFILIATES in the LICENSED TERRITORY, where LICENSOR is not the sole assignee of the LICENSED PATENT(S) covering such ROYALTY-BEARING PRODUCT.

During the term of this LICENSE, for each calendar year beginning with calendar year 1998, LICENSEE shall pay LICENSOR an annual minimum royalty of Ten Thousand Dollars ($10, 000), which payment shall be due and payable for each calendar year in advance, prior to October 1st of the preceding year (for example, the first annual minimum royalty payment (that is, for calendar, year 1998) shall be due and payable prior to October 1, 19,97). These minimum royalty payments shall be creditable against royalties owed 'to LICENSOR by LICENSEE on account of sales by LICENSEE or its AFFILIATES or SUBLICENSEES of ROYALTY-BEARING PRODUCTS during subsequent calendar years.

In addition, LICENSEE shall pay a royalty to LICENSOR of (a) [*] of any royalties received by LICENSEE with respect to the NET SELLING PRICE of ROYALTY-BEARING PRODUCTS sold by LICENSEE's SUBLICENSEES, where LICENSOR is the sole assignee of the LICENSED PATENT covering such ROYALTY-BEARING PRODUCT; or (b) [*] of any royalties received by LICENSEE with respect to the NET SELLING PRICE of ROYALTY-BEARING PRODUCTS sold by LICENSEE's SUBLICENSEES, where LICENSOR is not the sole assignee of the LICENSED PATENT(S) covering such ROYALTY-BEARING PRODUCT. However, in no event shall LICENSOR'S royalty be reduced below [*], such percentage being the minimum royalty rate to LICENSOR on such NET SELLING PRICE for sales of ROYALTY-BEARING PRODUCTS by SUBLICENSEES.

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Royalties will not be, paid on items sold directly to agencies of the U.S. Government or for known U.S. Government end use.

Only one royalty obligation shall be imposed with respect to the same unit of ROYALTY-BEARING PRODUCT regardless of the number of VALID CLAIMS of the LICENSED PATENTS covering the same.

If LICENSEE is required to pay a royalty to a third party (other than MICHIGAN pursuant to the May 28, 1992 License Agreement, as amended, between MICHIGAN and GI's predecessor in interest under such License Agreement, Repligen Corporation) in order to sell the ROYALTY-BEARING PRODUCTS in a particular country, then [*] of that royalty will be deducted from the royalty otherwise payable hereunder on the NET SELLING PRICE of such ROYALTY-BEARING PRODUCTS in such country; provided, however, that in no event shall the royalty thus payable by LICENSEE on account of its sales be reduced below [*]. LICENSEE agrees that royalty deductions under this paragraph will not be made without LICENSOR's prior written approval, which approval shall not be unreasonably 'withheld or delayed. When seeking LICENSOR's prior written approval under the preceding sentence, LICENSEE, shall submit to LICENSOR such materials as LICENSOR may reasonably request in order to evaluate LICENSEE's , request , for such deductions, including, without limitation, a copy of the license' with the third party, copies of the patents licensed from the third party, identification of the patent claims on which the royalty deduction is to be made, and a sufficient description of the ROYALTY-BEARING PRODUCT to permit a comparison of the third party's patent claims with that ROYALTY-BEARING PRODUCT.

LICENSEE shall send to LICENSOR all royalties which accrue between January 1 and December 31 of each year by March 1 of the following year. A royalty report shall be included with each payment setting forth, separately by Licensed Patents, the quantity and net-selling price of each royalty-bearing product sold during the period covered by the report, to whom sold and the date of such sale, the total amount of royalties being paid for that year and the computation of the amount of royalties owed. Royalty reports are due each calendar year. The last royalty report is due- sixty (60) days after the expiration of this LICENSE.

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

All payments due LICENSOR under this LICENSE shall be made payable to the Treasurer of the United States and mailed to:

Deputy Counsel (Intellectual Property)

Office of Naval Research
Code OOCCIP, Room 207
800 North Quincy Street
Arlington, Virginia 22217-5660

LICENSEE agrees to make and keep full, accurate and complete books and records as are necessary to establish its compliance with this Article IV.

LICENSEE agrees that LICENSOR may, if LICENSOR so desires at a future time or times, have a duly authorized agent or representative in LICENSOR's behalf inspect, check or verify all such books and records either at LICENSEE's business premises or at a place mutually agreed upon by LICENSEE and LICENSOR.

ARTICLE V.
Patent Marking and Nonendorsement

LICENSEE hereby agrees to mark each product manufactured or sold under this LICENSE (or when the character of the product precludes marking, the package containing any such product) with the notation "Licensed from U.S. Navy under U.S. Patent No. _____ "(to be completed by LICENSEE, for each LICENSED PATENT, as applicable). LICENSEE agrees not to create the appearance that LICENSOR endorses LICENSEE's business or products.

ARTICLE VI.
Representations and Warranties

LICENSOR makes no representation or warranty as to validity of any of the LICENSED PATENTS or of the scope of any of the claims contained therein or that the exercise of, this LICENSE will not result in the infringement of other patent(s). Neither LICENSOR nor its employees assume any liability whatsoever resulting from the exercise of this LICENSE.

Nothing relating to the grant of this LICENSE, nor the grant itself, shall be construed to confer upon LICENSEE or any sub-licensee hereunder or any other person any immunity from or defenses 'under the antitrust laws or from a charge of patent misuse, and the acquisition and use of rights pursuant to this LICENSE shall not be immunized from the operation of State or Federal law by reason of the source of the grant.

Nothing contained in this LICENSE shall be interpreted to grant to LICENSEE any rights with respect to any inventions other than the LICENSED INVENTIONS.

ARTICLE VII.
Reports

LICENSEE agrees to submit periodic reports on its efforts to achieve practical application of the LICENSED INVENTIONS, with particular reference to LICENSEE'S plan for development and marketing of the LICENSED INVENTIONS submitted with LICENSEE'S application for license. These reports shall contain information within LICENSEE'S knowledge, or which it may acquire under normal business practices, pertaining to the commercial use being made of the LICENSED INVENTIONS and other information which LICENSOR may determine is pertinent to Government licensing activities. LICENSEE agrees to submit such reports to LICENSOR annually until 'such time that the LICENSED INVENTIONS have been brought to the point of practical application.

ARTICLE VIII.
Modification and Termination

This LICENSE may be terminated in whole or in part by LICENSOR if:

(1) LICENSOR determines that LICENSEE is not executing the plan submitted with the request for license dated June 28, 1996 and LICENSEE cannot otherwise demonstrate to the satisfaction of LICENSOR that it has taken or can be expected to take within a reasonable time effective steps to achieve practical application of these LICENSED INVENTIONS;

(2) LICENSOR determines that such action is necessary to meet requirements for public use specified by Federal regulations issued after the date of this LICENSE and such requirements are not reasonably satisfied by LICENSEE;

(3) LICENSEE willfully made a false statement of or willfully omitted a material fact in its application for license or in any report required by this LICENSE; or

(4) LICENSEE commits a substantial breach of a covenant or agreement herein contained.

This LICENSE shall automatically terminate on September 30 of any year if the minimum annual royalty due for the subsequent calendar year, as set forth in Article IV of this LICENSE, is not timely paid; provided, however, if the minimum annual royalty payment, together with a surcharge of five hundred dollars ($500.00) is paid prior to December 31st of such calendar year, then this LICENSE shall be considered as not having automatically terminated. During such grace period, LICENSOR shall not take any actions which would prevent LICENSEE 'from reinstating this LICENSE, without the LICENSEE's prior written consent.

This LICENSE may be modified or terminated in whole or in part consistent with the law and applicable regulations upon mutual agreement of LICENSOR and LICENSEE evidenced in writing and signed by both parties.

This LICENSE may be restricted to the fields of use or geographic areas, or both, in which the LICENSEE has brought the LICENSED INVENTIONS to practical application and continues to make the benefits of the LICENSED INVENTIONS reasonably accessible to the public. However, such restriction may be made only after the expiration of TEN (10) years following the effective date of this LICENSE.

LICENSEE may request modification of this LICENSE in writing sent to LICENSOR and stating the reasons therefor.

Before modifying or terminating in whole or in part this LICENSE for any cause other than by mutual agreement, LICENSOR shall furnish LICENSEE and each sublicensee of record a written notice of intention to modify or terminate in whole or ii part this LICENSE, and LICENSEE and any sublicensee shall be allowed ninety (90) days after such notice or other agreed—upon time period, whichever is greater, to remedy any breach of any covenant or agreement set forth in this LICENSE or to show cause why this LICENSE should not be modified or terminated in whole or in part.

LICENSEE has a right to appeal, in accordance with procedures prescribed by the Chief of Naval Research, any decision or determination concerning the interpretation, modification, termination in whole or in part of this LICENSE.

Upon termination or expiration of, this LICENSE, the parties shall continue to be responsible for any obligations (including, without limitation, royalty obligations) which have been incurred prior to such termination or expiration.

ARTICLE IX.
Officials Not to Benefit

No member of or delegate, to Congress, or resident commissioner, shall be admitted to any share or part, of this LICENSE or to any benefit to arise thereupon.

ARTICLE X.
Notice

All communications and notices required under this LICENSE shall be considered duly given if timely mailed by U.S. Postal Service, first class, postage prepaid and addressed as follows:

(a) if to LICENSOR:

Deputy Counsel (Intellectual Property)
Office of Naval Research (Code OOCCIP)
800 North Quincy Street
Arlington, Virginia 22217-5660

(b) if to LICENSEE:

General Counsel
GENETICS INSTITUTE, INC.
87 CambridgePark Drive
Cambridge, Massachusetts 02140

or such mailing address as either party may from time to time specify in writing.

ARTICLE XI.
Sublicensing

LICENSEE may grant, subject to the approval of LICENSOR, which approval shall not be unreasonably withheld or delayed, sublicenses with the ability to grant further sublicenses, to AFFILIATES and SUBLICENSEES under this LICENSE, upon terms and conditions that LICENSEE may arrange provided that:

a. Each sublicense shall be in writing and make reference to this LICENSE including the rights retained by LICENSOR under this LICENSE; and

b. Each sublicense shall specify that it is granted pursuant to this LICENSE, that no provision shall be in derogation of or diminish any rights in this LICENSE and include the condition that the sublicense shall automatically be modified or terminated in whole or in part upon the 'modification or termination' in whole or in part of this LICENSE; and

c. Before any sublicense is granted by LICENSEE, the written approval of LICENSOR shall first be obtained for each sublicense; and

d. Within thirty (30) days after the issuance or modification of any sublicense hereunder, LICENSEE shall furnish LICENSOR with a true and complete copy of the sublicense or any modification thereof;

e. The granting of any sublicense by LICENSEE shall in no way relieve LICENSEE from any of the requirements of this LICENSE. Any sublicense granted by LICENSEE that does not comply with the requirements of this Article XI is void.

ARTICLE XII.
Reservation of Rights

LICENSOR reserves the right to require LICENSEE to and LICENSEE agrees to grant promptly sublicenses to responsible applicants on reasonable terms when necessary to fulfill health and safety needs of the public to the extent such needs are not being reasonably satisfied by LICENSEE and its sublicensees.

This LICENSE is subject to the irrevocable, royalty-free right of the Government of the United States to practice and have practiced these LICENSED INVENTIONS throughout the world by or on behalf of the United States and by or on behalf of any foreign government or intergovernmental or international organization pursuant to any existing or, future treaty or agreement with the Government of the United States.

This LICENSE is subject to any licenses, in force at the time of the grant of this LICENSE.

ARTICLE XIII.
Litigation

LICENSOR does not by entering into this LICENSE transfer the property rights in the LICENSED INVENTIONS, provided however, that LICENSEE has the right of enforcement of the LICENSED PATENTS, at no cost to the Government, pursuant to the provisions of Chapter 29 of Title 35, United States Code, or other statutes. LICENSEE shall pay LICENSOR the lesser of (i) an amount equal to the royalty that would have been payable by LICENSEE in accordance with this LICENSE had the unlicensed entity been licensed by LICENSEE, or (ii) one-half of the actual recovery after deduction of LICENSEE'S litigation costs and expenses.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed by their, duly authorized representatives.

UNITED STATES OF AMERICA
For the Secretary of the Navy

By: _____

Title: _____

Date: _____

GENETICS INSTITUTE, INC.

By: _____

Title: _____

Date: _____

Attest: _____

SCHEDULE A

October 16, 1996 Letter

Via Telecopier
Original via Federal Express

Commanding Officer
Naval Medical Research and Development Command
Building One T-12
8901 Wisconsin Avenue
Bethesda, MD 20889-5606 Navy

Attention: Code 00CC44 – David Spevack

Dear Sir or Madame:

Genetics Institute, Inc. (“GI”) and The Naval Medical Research and Development Command (the “Navy”) have signed a letter agreement dated October 16, 1995, pursuant to which the Navy consented to the substitution of GI for Repligen Corporation (“Repligen”) under a Cooperative Research and Development Agreement effective December 20, 1991, as subsequently’ amended by Repligen and the Navy from time to time (the “CRADA”). As Repligen’s successor-in-interest under the CRADA, GI has assumed all of Repligen’s rights and obligations with respect thereto:

Pursuant to the terms of the CRADA, Or hereby exercises option to obtain an exclusive license to the patent applications filed by the Navy within the last year.

In addition, GI respectfully requests that the Navy permit GI to exercise option to obtain an exclusive license to patent applications filed by the Navy, pursuant to option rights under the CRADA which have previously expired.

By signing both copies of this letter and returning one copy to me for our records, the Navy hereby acknowledges that 01 has exercised its option to obtain an exclusive license to the patent applications described above, on the terms and conditions set forth in the CRADA.

Thank you for your attention and consideration.

Sincerely,

Thomas DesRosier
Vice President,
Chief Patent Counsel

AGREED TO AND ACCEPTED:

Naval Medical Research and Development Command

By: _____

Print Name: _____

Title: _____

SCHEDULE B

LICENSED PATENTS

Serial Number/ Patent Number	Title and Inventor(s)	Filing Date/Issue Date
USSN08/073, 223	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel and Gary S. Gray	06/04/93
USSN08/253, 964	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, and Paul D. Rennert	06/03/94
USSN08/253, 751	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, Paul D. Rennert, and Gordon J. Freeman	06/03/94
USSN08/453, 925 (Div. of USSN08/253, 751)	*Methods for Selectively .Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, Paul D. Rennert, and Gordon J. Freeman	05/30/95
USSN08/403, 253	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, and Paul D. Rennert	03/10/95
USSN08/453, 816	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, and Paul D. Rennert	05/04/95
USSN08/592, 711	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, and Paul D. Rennert	01/02/96

Serial Number/ Patent Number	Title and Inventor(s)	Filing Date/Issue Date
USSN08/245, 282	*Methods for Modulating T-Cell Activation by Manipulating CD-28-Associated Signal Transduction* by Carl H. June	04/29/94
USSN08/435, 518	*Methods for Enhancing T-Cell Survival by Augmenting BCL-XL Protein Levels* by Carl H. June and Craig B. Thompson	05/04/95
USSN08/481, 739	*Methods for Modulating T-Cell Survival by Modulating BCL-X_L Protein Level* by Carl H. June and Craig B. Thompson	06/07/95
USSN08/435, 095	*Methods for Modulating Expression of Exogenous DNA in T-Cells* by Carl H. June, Craig B. Thompson, and Suil Kim	05/04/95
USSN08/475, 136	*Improved Methods for Transfecting T-Cells* by Carl H. June, Craig B. Thompson, and Suil Kim	06/07/95
06/07/95	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, and Paul D. Rennert	06/03/95
70521/94 Australia	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, and Paul D. Rennert	06/03/94
2,164,226 Canada	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, and Paul D. Rennert	06/03/94
94 91 9346.0 Europe	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, and Paul D. Rennert	06/03/94

Serial Number/ Patent Number	Title and Inventor(s)	Filing Date/Issue Date
501964/1995 Japan	*Methods for Selectively Stimulating Proliferation of T-Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, and Paul D. Rennert	06/03/94
PCT/US94/13782	*Methods for Selectively Stimulating Proliferation of T - Cells* by Carl H. June, Craig B. Thompson, Gary J. Nabel, Gary S. Gray, Paul D. Rennert, and Gordon F. Freeman	12/01/94
PCT/US95/05213	*Methods for Stimulating T-Cell Responses by Manipulating Intracellular Signal Transduction* by Carl H. June	05/01/95
PCT/US96/06203	*Methods for Modulating T-Cell Survival by Augmenting BCL-X_L Protein Levels* by Carl H. June and Craig B. Thompson	05/02/96
PCT/US96/06200	*Improved Methods for Transfecting T-Cells* by Carl H. June, Craig B. Thompson, and Suil Kim	05/02/96

Exhibit B

Michigan Agreement

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [*]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

LICENSE AGREEMENT

This is an Agreement dated as of the 28th day of May 1992 by and between Repligen Corporation, a Delaware corporation having its principal office at One Kendall Square, Building 700, Cambridge, Massachusetts 02139 (hereinafter "Repligen"), and the Regents of the University of Michigan, a constitutional corporation of the State of Michigan having an office at 475 East Jefferson Street, Ann Arbor, Michigan 48109-1248 (hereinafter "UM").

WHEREAS, UM possesses certain intellectual property pertaining to immune regulation mediated by B7, [*] and CTLA-4; and

WHEREAS, Repligen desires to obtain licenses under said intellectual property rights;

NOW, THEREFORE, UM and Repligen agree as follows:

I. Definitions

1.1 "Parties, in singular or plural usage as required by the context,. means Repligen and/or UM.

1.2 The "Licensed Patents" means (i) UM's ownership or license interest in patent applications as listed in Appendix A hereof, as well as in all foreign equivalent patent applications, including Patent Cooperation Treaty filings, and all patents issuing therefrom in which UM has a property interest or under which UM acquires licensing rights; and (ii) any divisions or continuations of the patents or patent applications set forth above, including any reissue, reexamination or extension of the above-described patents, any extended or restored term, and any confirmation patent, registration patent, or patent of addition. UM shall notify Repligen, from time to time, as new patent applications are made or patents issued which fall within the definition of Licensed Patents and Appendix A shall be appropriately updated to reflect such changes.

1.3 "Valid Claim(s)" means any claim(s) pending in a patent application or in an unexpired patent included within the Licensed Patents which has not been held unenforceable, unpatentable, 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 admitted to be invalid or unenforceable through reissue or disclaimer. If in any country there should be two or more such decisions conflicting with respect to the validity of the same claim, the decision of the higher or highest tribunal shall thereafter control; however, should the tribunals be of equal rank, then the decision or decisions upholding the claim shall prevail when the conflicting decisions are equal in number, and the majority of decisions shall prevail when the conflicting decisions are unequal in number.

1.4 “Licensed Product” means any product in the Licensed Fields whose manufacture, use or sale in any country would, but for either ownership of or a license under the Licensed Patents, comprise an infringement, including contributory infringement, of one or more Valid Claims in such country.

1.5 “Combination Product” means any Licensed Product sold in combination with a second discrete product containing one or more active ingredients which are not Licensed Products.

1.6 “Sublicensee” means any person or entity (other than an Affiliate) sublicensed by Repligen to practice Licensed Patent(s)

1.7 “Net Sales” means the sum of all amounts received and all other consideration received (when in a form other than cash or its equivalent, the fair market value thereof when received) by Repligen, its Affiliates or Sublicensees, as the case may be, from persons or entities who are not Affiliates or Sublicensees by reason of the sale, distribution or use of Licensed Products, including Combination Products, less the following deductions and offsets but in the case of the deductions and offsets described in clauses (a)-(d) below only to the extent the monies represented by such deductions and offsets have actually been included in the sum referred to above.

(a) trade and quantity discounts actually allowed and taken;

(b) returns, rebates and allowances when actually taken;

(c) retroactive price reductions, if any, when actually credited;

(d) uncollected invoices for Licensed Products, to the extent written off as uncollectible on Repligen’s, Affiliates’ or Sublicensees’ books, as the case may be;

(e) with regard to sales in the United States, four percent (4%) of the amount invoiced and paid to cover cash discounts, sales or excise taxes, transportation and insurance charges; and with regard to sales outside the United States six percent (6%) to include the above and additional special packaging, duties, and other governmental charges.

1.8 “Territory” means all countries of the world.

1.9 “Affiliate(s)” means any individual, corporation, partnership, proprietorship or other entity controlled by, controlling, or under common control with Repligen through equity ownership, ability to elect directors, or by virtue of a majority of overlapping directors, and shall include any individual, corporation, partnership, proprietorship or other entity directly or indirectly owning, owned by or under common ownership with the party in question to the extent of fifty percent (50%) or more of the equity or voting shares, including shares owned beneficially by such party.

1.10 “Royalty Quarters” means the three (3) months ending on the last day of March, June, September and December of each year.

1.11 “Effective Date” means the date upon which this Agreement has been entered into as mentioned in its introductory paragraph.

1.12 “Licensed Fields” means (i) immune stimulants in conjunction with vaccines, (ii) immunostimulation/suppression, and (iii) if the option granted under Section 2.2 is exercised, the Option Fields.

1.13 “Option Fields” means all potential fields of use not) included in Licensed Fields, including (a) non-biological, chemically-synthesized drug compounds whose mode of action is intracellular and (b) non-biological, chemically-synthesized drug compounds whose mode of action is extracellular.

II. License Grant

2.1 Subject to the terms and conditions of this Agreement, UM grants to Repligen an exclusive license of UM’s interest under the Licensed Patents for the purpose of making, having made, manufacturing, using, marketing and selling Licensed Products, solely within Licensed Fields, in the Territory, with the right to grant sublicenses to Affiliates and Sublicensees, neither of which shall be allowed to further sublicense the rights licensed hereunder

2.2 Subject to the terms and conditions of this Agreement, UM grants to Repligen an exclusive option to include the Option Fields in the Licensed Fields. Such exclusive option shall be automatically exercised, and the Option Fields shall be included in the Licensed Fields on the first to occur of the following events:

(a) the organization by Repligen of a separate corporate entity to develop B7/[*]/CTLA-4 technology;

(b) demonstrated intent by Repligen to obtain significant independent financing for the development of Licensed Products focusing on the B7/CTLA-4/[*] pathway;

(c) preparation of an IND (or similar application in any foreign country) acceptable for filing with respect to any product candidate in the Option Fields;

(d) total documented expenditure by Repligen of five million dollars ($5,000,000) on research relating to the development of Licensed Products focusing on the B7/CTLA-4/[*] pathway;

(e) execution of a development agreement or marketing agreement in the Licensed Fields or any Option Field between Repligen and any third party.

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

If not sooner exercised, the exclusive option granted herein shall automatically expire if Repligen shall fail to expend (and to document such expenditure annually, upon request) at least one million dollars ($1,000,000) on research relating to the development of Licensed Products focusing on the B7/CTLA-4/[*] pathway during any consecutive twelve (12) month period ending on any anniversary of the Effective Date. Except as provided in the preceding sentence, such exclusive option shall remain in effect during the term of this Agreement. Unless and until such exclusive option expires, UM shall not grant any rights in or to the Licensed Patents in the Option Fields, other than as provided in Section 2.3.

2.3 UM retains the right to grant to the Howard Hughes Medical Institute ("HHMI") a non-exclusive, irrevocable, royalty-free license, without the right to grant sublicenses, to the Licensed Patents, as required by UM's Patent and Intellectual Property Agreement with HHMI. UM retains the right to use all aspects of the Licensed Patents, any means, solely for internal research and education purposes.

III. Patent Protection and Validity

3.1 UM represents and warrants to Repligen that:

(a) UN is an owner of an undivided interest in the Licensed Patents. (The Licensed Patents are jointly owned by UM and certain third parties);

(b) UM has the full right, power and authority to enter into this Agreement and to grant the licenses under Article II hereof;

(c) UM is not aware of any pending or threatened litigation (and has not received any communication) which alleges that any Party's activities in the Licensed Fields or in the Option Fields have violated the intellectual property rights of any other person;

(d) UM is not aware of any unauthorized use, infringement or misappropriation of any of the Licensed Patents; and

(e) UM has not as of the Effective Date entered into any agreement with any third party (other than an agreement with Bristol Myers Squibb regarding CTLA-4, the existence of which agreement has been disclosed to Repligen) concerning the transfer by UM or licensing by UM of, or grant by UN of a security interest in, any rights to or under the Licensed Patents in the Licensed Fields or in the Option Fields.

In the event of any breach by UM of the representations and warranties set forth in this Section 3.1, any resulting liabilities, including legal and equitable, shall be limited to the sum of all payments received by UM under Article VIII herein.

3.2 UM (and/or its joint owner in the case of co-owned Licensed Patents including a licensee of such joint owner ("Joint Owner")) shall control all aspects of prosecuting and

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

maintaining the Licensed Patents. UM shall not voluntarily relinquish its own right as a joint owner to participate in the control of the prosecution and maintenance of the Licensed Patents. UM shall promptly notify Repligen of all information received by UN relating to the prosecution and maintenance of Licensed Patents, including without limitation any lapse, revocation, surrender, invalidation or abandonment of any of the. Licensed Patents.

3.3 UM shall provide notice to Repligen of all reasonable and necessary expenses paid by UN to third parties in drafting, monitoring, filing, prosecuting and maintaining the Licensed Patents, and in maintaining or asserting its inventorship or ownership interest in Licensed Patent(s), even as to the other Joint Owner, including without limitation fees paid to outside counsel or consultants; patent office fees for filing, prosecution, reissue, reexamination and issue; maintenance fees; and reasonable travel expenses incurred by UM employees for the purpose of monitoring, prosecuting and maintaining the Licensed Patents, but not including any part of any UM employee's salary. Upon receipt of such notice, Repligen shall promptly reimburse UM for all such reasonable and necessary expenses except those expenses which are chargeable to Joint Owner.

3.4 UM and/or Joint Owner may in their/its sole discretion decide to refrain from or to cease prosecuting or maintaining any of the Licensed Patents. In the event that both UM and Joint Owner make such decision, UN shall notify Repligen promptly and in sufficient time to permit Repligen at its sole discretion to continue such prosecution or maintenance at Repligen's expense. If Repligen elects to continue such prosecution or maintenance, UN shall execute such documents and perform such acts at Repligen's expense as may be reasonably necessary for Repligen to so continue such prosecution or maintenance.

3.5 [*] of Repligen's payments and expenses as described in Sections 3.3, 3.4, 3.10, 16.1 and 16.2 hereof, and [*] of .Repligen's otherwise unrecovered expenses under Sections 3.6, 3.7 and 3.9 hereof shall be credited against earned royalties, subject to the limitations of Section 8.11, and amounts so credited shall then be deemed recovered.

3.6 In the event either Party shall learn of any potential infringement of a claim of any of the Licensed Patents, that Party shall immediately supply the other Party with written notice of such potential infringement. Provided this Agreement has not been terminated, Repligen shall have the first right at its expense to institute and control all actions brought for infringement of any of the Licensed Patents when, in Repligen's sole judgment, such action may be reasonably necessary, proper, and justified. In the event Repligen declines within one year of its receipt of such notice of infringement to either (i) cause infringement to cease, or (ii) initiate legal proceedings against the infringer, UM may upon notice to Repligen initiate legal proceedings against the infringer at UM's expense.

3.7 In the event either Party shall initiate or carry on legal proceedings to enforce any of the Licensed Patents against an alleged infringer, the other Party shall fully cooperate with, and supply all reasonable assistance requested by, the Party initiating or carrying on such proceedings. Except as described in Section 3.11 below, the Party that institutes any suit to protect or enforce any of the Licensed Patents shall have sole control of that suit and shall bear

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

the reasonable expenses incurred by said other Party in providing such assistance and cooperation as is requested pursuant to this section.

3.8 Any recovery obtained by either UN or Repligen as the result of legal proceedings initiated and paid for by Repligen to enforce any of the Licensed Patents against an alleged infringer, whether obtained by settlement or otherwise, shall after payment of all otherwise unrecovered expenses attributable to such action paid by Repligen or by UM or by both Repligen and UM, including without limitation fees paid to outside counsel or consultants, and reasonable travel expenses, but not including any part of any UM employee's salary or Repligen employee's salary, be paid 75% to Repligen and 25% to UM. In the event that Repligen does not initiate the prosecution or defense of such action and maintain such action at its expense, UM shall retain 100% of its recovery after payment to Repligen of any unrecovered expenses paid by Repligen at UM's request to third parties in furtherance of such action.

3.9 Each Party shall immediately give notice to the other upon said Party's receipt of any certification filed under the U.S. "Drug Price Competition and Patent Term Restoration Act of 1984" claiming that any of the Licensed Patents is invalid or that infringement will not arise from the manufacture, use or sale of Licensed Products. If Repligen decides not to bring infringement proceedings at its expense against the entity making such a certification, Repligen shall give notice to UM of its decision not to bring suit within twenty-one days after receipt of notice of such certification. At its expense, UM may then, but is not required to, bring suit against the entity that filed the certification. Any suit by Repligen or UM shall either be in the name of Repligen or in the name of UM, or jointly by Repligen and UM, 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.

3.10 The Parties shall cooperate with one another in gaining any patent term extension that may be applicable to the Licensed Patents. Any and all filings for any such extension will be made by and at the expense of Repligen after consultation with UM.

3.11 Neither Party shall compromise or settle any claim or action regarding Licensed Patents in any manner that would affect the rights of the other Party without the written consent of said other Party, which consent shall not be unreasonably withheld.

IV. Sublicenses

4.1 Repligen shall have the exclusive right under the license granted in Article II herein to grant sublicenses to Affiliates and Sublicensees under Licensed Patents, provided:

(a) Repligen shall notify UM of every sublicense agreement and each amendment thereto, within thirty (30) days after their execution, and indicate the name of the Sublicensee or Affiliate, territory of the sublicense, scope of the sublicense, and the nature, timing and amounts of all fees and royalties to be paid thereunder;

(b) All sublicenses shall attach a copy of this Agreement as an exhibit and shall be consistent with the terms of this Agreement;

(c) All sublicenses shall contain acknowledgements of the University's disclaimer of warranty and limitation on liability as provided by Section 12 below; and

(d) All sublicenses shall require the Sublicensee or Affiliate to accept duties equivalent to those accepted by Repligen herein in Sections 7.3, 9.3, 11, 17, 21 and 25.

4.2 Any sublicense granted by Repligen shall provide for its termination upon termination of this Agreement, provided, however, that a sublicense granted to any Sublicensee may permit such Sublicensee, by written notice to UM within sixty (60) days of the Sublicensee's receipt of written notice of such termination, to elect to continue its sublicense; subject to the approval of UM of such continuation, which approval shall not be unreasonably withheld. No such election will be valid unless such Sublicensee agrees in writing at the time of election to assume in respect to UM all of the obligations (including obligations for payment) contained in its sublicense agreement with Repligen.

V. License Rights; Future Ownership Rights

5.1 UM shall use continuing good faith efforts to obtain from the United States Navy an exclusive license, in accordance with the provisions of 37 CFR§404, to the United States Navy's rights in U.S. Patent Application Serial No. 275,433.

5.2 Upon the date of the execution of this Agreement, Appendix A and the license granted in Section 3.1 shall not include license rights obtained by UM pursuant to Section 5.1. By written agreement with Repligen, UM shall amend this Agreement and Appendix A hereto in order to include in Appendix A all license rights obtained by UM pursuant to Section 5.1, on the conditions that:

(a) any such amendment shall be subject to the express approval of the United States Navy of this Agreement and such amendment; and

(b) such amendment shall include those terms or modifications of existing terms which may be required by 37CFR§404 or other applicable rules of the United States Government.

VI. Confidentiality and Publications

6.1 All technical information of either Party relating to the Licensed Patents or Licensed Products, which is disclosed to the other Party during the term of this Agreement, in a writing marked "CONFIDENTIAL" (or, if initially orally disclosed, is confirmed in writing and designated as "CONFIDENTIAL" within thirty (30) days of such initial disclosure), shall be maintained in confidence by the receiving Party for a period of three (3) years from receipt and shall not be disclosed by the receiving Party during that period to any other person, firm, or agency, governmental or private, without the prior written consent of the disclosing Party, except to the extent that the information:

(a) is known at the time of its receipt as documented in written records, or

(b) is properly in the public domain, or

(c) is subsequently disclosed to the receiving Party by a third party who may lawfully do so, or

(d) is required to be disclosed to governmental agencies in order to gain approval to sell Licensed Products, or

(e) is necessary to be disclosed to agents, consultants, Affiliates, Sublicensees and/or other third parties for the research and development and/or marketing of Licensed Products under this Agreement, which entities first agree to-be bound by the confidentiality obligations contained in this Agreement, or

(f) is required to be disclosed by law or by court order.

(Such confidential information to be maintained in confidence under this section is referred to below as “Confidential Information”.)

6.2 Repligen recognizes that under UM policy, research relating to Licensed Patents or Licensed Products must be publishable, subject to the terms set forth herein. Repligen agrees that UM and HHMI researchers shall be permitted to present their results at symposia, national, or regional professional meetings, and to publish the results in journals, theses or dissertations, or otherwise of their own choosing, provided, however, that Repligen shall have been furnished copies of any proposed publication or presentation relating to Licensed Patents or Licensed Products at least one month in advance of the submission of such proposed publication or presentation to a journal, editor, or other third party. Repligen shall have one month after receipt of said copies, to object to such proposed presentation or proposed publication because there is patentable subject matter which needs protection or because it contains Confidential Information of Repligen.

6.3 In the event that Repligen makes an objection under 6.2 above, said researcher(s) shall, as the case may be, remove Repligen’s Confidential Information from such publication, and refrain from making such publication or presentation for a maximum of four (4) months from date of receipt of such objection in order for UM or Repligen to file patent application(s) with the United States Patent and Trademark Office or foreign patent office(s) directed to the patentable subject matter contained in the proposed publication or presentation.

VII. Commercialization

7.1 It is understood that Repligen shall be responsible for obtaining any governmental approvals which may be necessary to manufacture and/or sell Licensed Products. If Repligen decides in its sole discretion that it is feasible to manufacture and sell Licensed Products at an acceptable profit, Repligen shall use its best efforts to obtain such government approvals, and upon receipt thereof, to cause Licensed Products to be manufactured and sold. For the purpose hereof, “best efforts” shall mean the usual practice followed by Repligen in pursuing commercialization of its products. In the event Repligen shall breach any covenant set forth in

this Section 7.1, UM's sole remedy with respect to such breach shall be to terminate this Agreement under Section 13.3.

7.2 Repligen shall keep UM informed, in writing of any material developments with respect to Licensed Products. Repligen shall promptly inform UM of any patent applications, or similar applications, relating to Licensed Products or improvements thereon, filed by or on behalf of Repligen or Affiliates anywhere in the world.

7.3 Repligen covenants to substantially manufacture and require Affiliates and Sublicensees to substantially manufacture within the United States all of their Licensed Products. Where domestic manufacture is not commercially feasible, UM will cooperate with Repligen to obtain appropriate waivers to this requirement from the United States Government.

VIII. Payments

8.1 The license rights granted to Repligen herein are subject to Repligen's payment of royalties to UN according to the provisions of this Article VIII.

8.2 Upon execution of this Agreement, Repligen shall pay eighty thousand dollars ($80,000) to UM. Upon receipt by UM of a license from the United States Navy pursuant to Section 5.1 above, and the inclusion of such license rights in Appendix A pursuant to Section 5.2, Repligen shall pay an additional twenty thousand dollars ($20,000) to UM.

8.3 With respect to each Royalty Quarter, Repligen shall pay UM a royalty equal to [*] of Repligen's and Affiliates' Net Sales of Licensed Products during such Royalty Quarter.

8.4 With respect to Combination Products, the fair market sales price of the active ingredient(s) of the discrete product(s) which are not themselves Licensed Products shall be subtracted from the selling price used to calculate Net Sales with respect to such Combination Product; provided that in the case of a Combination Product which includes one or more Licensed Products which are also sold in non-Combination Product form, the resulting Net Sales figure upon which UM's royalty is based shall not be reduced to less than the normal aggregate Net Sales for such Licensed Product(s) when not sold as Combination Product.

8.5 The obligation to pay UM a royalty under this Article VIII is imposed only once with respect to the same unit of Licensed Product regardless of the number of Valid Claims or Licensed Patents covering the same; however, for purposes of determination of payments due hereunder, whenever the term Licensed Product may apply to a property during various stages of manufacture, use or sale, Net Sales', as otherwise defined shall be derived from the sale, distribution or use of such Licensed Product by Repligen, Affiliates or Sublicensees, as 'the case may be, at the stage of its highest invoiced value to unrelated third parties.

8.6 With respect to each Royalty Quarter, Repligen shall pay UM [*] of any royalties received during such Royalty Quarter by Repligen or Affiliate(s) with respect to Net Sales of

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Sublicensee(s), and no other royalties with respect to such Net Sales of Sublicensee(s), except that with respect to Net Sales of Sublicensee(s) upon which Repligen or Affiliate(s) are themselves being paid a royalty by Sublicensee(s) of less than [*] of such Net Sales the following formula shall be applied to determine the royalty payment to UM:

UM's royalty will be equal to such Net Sales of Sublicensee multiplied by a royalty rate of "R" percent where R = [*] - [*]/[*]([*] - x) and "x" can be a maximum of [*] and a minimum of [*] and is the percentage rate of royalty paid by Sublicensee(s) to Repligen or Affiliate(s), as the case may be, on the above described Net Sales. For example, if a particular Sublicensee is paying Repligen a royalty of [*] for Net Sales of a particular Licensed Product, then UM receives a royalty from Repligen equal to [*] of such Net Sales ([*] minus one-eighth of the difference between [*] and [*]). The formula is intended to gradually reduce UM's royalty below [*] for Net Sales of Sublicensee(s) who are themselves paying a royalty of less than [*] on such Net Sales, and it establishes [*] as a minimum royalty rate to UM for such Net Sales by Sublicensee(s), including, if applicable, Net Sales of Combination Products as calculated in Section 8.4 above.

8.7 In addition, with respect to each Royalty Quarter, Repligen shall pay to UM [*] of any upfront or lump sum payments which Repligen receives during such Royalty Quarter from any Sublicensee in consideration of the grant of its sublicense. For the purpose hereof, upfront or lump sum payments shall not include any payment made to Repligen as a royalty on Net Sales of Sublicensee(s) or any Research Milestone Payment or Clinical Milestone Payment (as hereinafter defined).

8.8 (a) "Research Milestone Payment" means any payment received by Repligen from any Sublicensee which is payable by reason of the attainment of a research or development objective relating to technology described in Licensed Patent(s)' or to Licensed Product(s) themselves. With respect to each Royalty Quarter, Repligen shall pay to UM [*] of each Research Milestone Payment received during such Royalty Quarter.

(b) "Clinical Milestone Payment" means any payment received by Repligen from any Sublicensee which is payable by reason of the attainment of a clinical objective relating to one or more Licensed Product(s). With respect to each Royalty Quarter, Repligen shall pay to UM [*] of each Clinical Milestone Payment received during such Royalty Quarter.

(c) [*] of all amounts paid to UM under this Section 8.8 shall be credited against earned royalties, subject to the limitations contained in Section 8.11.

8.9 (a) If Repligen is required to pay an unrelated third party a royalty in a given country in order to sell the Licensed Products in that country, then [*] of that royalty will be deducted from the royalty otherwise payable hereunder for Net Sales of such Licensed Products in that country, provided that in no event shall the royalty thus payable by Repligen be reduced below [*] of Repligen's or Affiliates' Net Sales of Licensed Products in that country. Upon the

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

mutual agreement of the parties the royalty percentage for a particular Licensed Product may be reduced based on specific indications and associated market size and conditions.

(b) If Repligen is required to pay a royalty to the United States Navy or to HHMI in order to obtain the exclusive right as to the U.S. Navy, UM or HHMI, to practice any of the patents or patent applications included in Licensed Patents, in a given country, then, in, addition to any amounts deducted under subparagraph (a) above, one-hundred percent (100%) of that royalty shall be deducted from the royalty otherwise payable hereunder for Net Sales of Licensed Products in that country, provided that: (i) in no event shall the amounts deducted under this subparagraph (b) exceed' one and [*] of the Net Sales of Licensed Products in that country; and (ii) in no event shall the royalty thus payable by Repligen, after all deductions under this subparagraph (b) and subparagraph (a) above, be reduced below [*] of Repligen's or Affiliates' Net Sales of Licensed Products in that country.

8.10 Repligen agrees to pay minimum royalties to UM during the term of this Agreement on the following dates, for the following periods and in the following amounts.

Date	Amount
1. On January 1, 1995 for the calendar year beginning on that date, and on each January 1 thereafter, for each calendar year beginning on such date, but ceasing immediately prior to the date in item 2 below.	$ 10,000
2. On the earlier of January 1, 1998 or the January 1 immediately following the initiation of Phase I Clinical Trials on the first Licensed Product, for the calendar date beginning on such date, and on each January 1 thereafter, for each calendar year beginning on such date, but ceasing immediately prior to the date in item 3 below.	$ 20,000
3. On the January 1 immediately following the filing of a Product License Application for the first Licensed Product, for the calendar year beginning on such date.	$ 50,000
4. On the first and each subsequent anniversary of the payment in item 3 above, for the calendar year beginning on such date.	$ 50,000

All minimum royalties paid for a given year which, are in excess of that year's earned royalties shall be credited against future earned royalties otherwise payable under this Agreement, subject to the limitations in Section 8.11.

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

8.11 Notwithstanding anything to the contrary in this Agreement, the Parties agree that in no event shall the aggregate reduction of earned royalties on account of credits allowed by UM to Repligen under this Agreement in any Royalty Quarter exceed [*] of the earned royalties otherwise payable under this Agreement for such Royalty Quarter. Any credits in excess of these limitations shall be carried forward and applied against earned royalties in subsequent Royalty Quarters until fully credited or until termination of this Agreement. Upon termination of this Agreement, Repligen shall have no right to recover unused credits except to the extent that they may continue to be credited against up to [*] of the royalties payable after termination, subject to the limitations set forth herein.

8.12 If at any time or from time to time an unrelated third party in any country shall, under right of a compulsory license granted or ordered to be granted by a competent governmental authority, manufacture, use or sell any Licensed Product with respect to which royalties shall be payable pursuant to Section 8.3 herein, then Repligen, upon notice to UM and during the period such compulsory license shall be effective, shall have the right to reduce such royalty to UM on each unit of Licensed Product sold in such country to an amount no greater than the amount payable by said third party in consideration of its compulsory license.

8.13 Repligen agrees to refrain from any business dealing relating to Licensed Patents or Licensed Products in which a significant purpose or result would be to lower UM's share of income or actual income resulting from this Agreement or the sale, use or commercialization of Licensed Products. This Section 8.13 shall not be construed in such a way as to (i) enlarge Repligen's obligations under Section 7.1 or (ii) provide any remedy to UM if Repligen terminates this Agreement under Section 13.4.

IX. Reports

9.1 Within sixty (60) days after the close of each Royalty Quarter during the term of this Agreement (including any Royalty Quarter which closes following any termination of this Agreement), Repligen shall report to UM all royalties or other payments accruing to UM under Article VIII during such Royalty Quarter. Such quarterly reports shall indicate for each Royalty Quarter the gross sales and Net Sales of Licensed Products; such reports shall also indicate the source and amount of all other revenues with respect to which payments are due to UM and the amount of such payments, as well as the various calculations used to arrive at said amounts, including the quantity, description. (nomenclature and type designation), country of sale and country of manufacture of Licensed Products. In case no payment is due for any such period, Repligen shall so report.

9.2 Repligen covenants that it will promptly establish and consistently employ a system of specific nomenclature and type designations for Licensed Products so that the various types can be identified and segregated. Repligen, Affiliates and Sublicensees will consistently employ such system when rendering invoices thereon and henceforth agree to inform UN, or its auditors, when requested as to the details concerning such nomenclature system as well as to all additions thereto and changes therein.

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

9.3 Repligen shall keep and it shall cause Affiliates and Sublicensees to keep, true and accurate records and books of account containing data reasonably required for the computation and verification of payments to be made as provided by this Agreement, which records and books shall be open for inspection upon reasonable notice during business hours by either UM auditor(s) or an independent certified accountant selected by UM, except one to whom Repligen has a reasonable objection, for the purpose of verifying the amount of payments due and payable. Said right of inspection may be exercised not more than once in any calendar year, but will exist for four (4) years from the date of origination of any such record and this requirement and right of inspection shall survive any termination of this Agreement. UM shall be responsible for all expenses of its auditor(s) or independent accountants associated with 'such inspection. However, in the event that such inspection reveals an underpayment of royalties to UM in excess of ten percent (10%), then said inspection shall be at Repligen's expense and such underpayment shall become immediately due and payable to UM. If such inspection reveals an overpayment of royalties to UM, at Repligen's election, UM shall promptly reimburse Repligen to the extent of such overpayment or credit such overpayment against Repligen's next royalty payment to UM.

9.4 The reports provided for hereunder shall be certified by an authorized representative of Repligen to be correct to the best of Repligen's knowledge and information.

X. Time and Currencies of Payments

10.1 Payments accrued at the close of each Royalty Quarter shall be due and payable in Ann Arbor, Michigan on the date each quarterly report, provided for under Article IX above, is due and shall be paid in United States dollars. Repligen agrees to make all payments due hereunder to UM by check made payable to the Regents of the University of Michigan and sent by prepaid, certified mail, return receipt requested, to the address set forth in Article XVIII herein.

10.2 On all amount's outstanding and payable to UM, interest shall accrue from the date such amounts are due and payable at a rate of two (2) points above the prime lending rate as established by the Chase Manhattan Bank, N.A. in New York City, New York, or at such lower rate as may be required by law.

10.3 In the case of sales of Licensed Products transacted in foreign currency, such foreign currency shall be converted into its equivalent in United States dollars at the exchange rate of such currency as reported (or if erroneously reported, as subsequently corrected) in the Wall Street Journal on the last business day of the Royalty Quarter during which such payments are received by Repligen, Affiliates or Sublicenses, as the case may be (or if not reported on that date, as quoted by the Chase Manhattan Bank, N.A. in New York City, New York).

10.4 Except as provided in the definition of Net Sales, all royalty payment to UM under this Agreement shall be without deduction for sales, use, excise, personal property or other similar taxes or other duties imposed on such payments by the government of any country or any political subdivision thereof; and any and all such taxes or duties shall be assumed by and paid by Repligen. Repligen shall have no liability for any income taxes levied against UM on account

of royalties or other payments received by UN on account of royalties or other payments received by UM under this Agreement. If laws or regulations require that any such taxes be withheld by Repligen, Repligen shall deduct such taxes from the payment due UM, pay the taxes so withheld to the taxing authority, and send proof of payment to UM within sixty (60) days following such payment.

XI. Product Liability

11.1 Repligen, Affiliates and Sublicensees assume all risk of damage or injury to persons or property arising out of the clinical testing, manufacture, use, distribution or sale of the Licensed Products by them or authorized by them and shall hold harmless and indemnify UM, its officers and employees from and against any and all personal injury, property damage, product liability or similar claims, losses and liabilities arising out of Repligen's, Affiliates' or Sublicensees' (or any business associates of any of these) clinical testing, manufacture, use, distribution or sale of the Licensed Products, including reasonable attorneys fees and other costs or defense. UM shall, promptly upon receipt of any claim that may be subject to indemnification hereunder, give written notice to Repligen of such claim, and Repligen shall assume the defense thereof, including the employment of counsel reasonably satisfactory to UM. UM shall have the right to employ separate counsel in any such action and to participate in the defense thereof, but the fees and expenses thereof shall be at UM's expense. Repligen shall not be liable for any settlement of any such claim, action or proceeding effected without its written consent.

11.2 Repligen shall purchase and maintain, and require Affiliates and Sublicensees to purchase and maintain, in effect a policy of product liability insurance covering all claims with respect to any Licensed Products used, manufactured, sold, licensed or otherwise distributed by Repligen within the term of this Agreement, and shall specify UM as an additional insured. Repligen shall furnish a certificate of such insurance to UM, upon request.

XII. No Warranty; Limitations of Liability

12.1 EXCEPT AS PROVIDED IN SECTION 3.1, UM MAKES NO REPRESENTATIONS, EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ASSUMES NO RESPONSIBILITIES WHATEVER WITH RESPECT TO DESIGN, DEVELOPMENT, MANUFACTURE, USE, SALE OR OTHER DISPOSITION BY REPLIGEN OR AFFILIATES OR SUBLICENSEES OF LICENSED PRODUCTS.

12.2 THE ENTIRE RISK AS TO PERFORMANCE OF LICENSED PRODUCTS IS ASSUMED BY REPLIGEN AND AFFILIATES AND SUBLICENSEES. In no event shall UM be responsible or liable for any direct, indirect, special, incidental, or consequential damages or lost profits to Repligen, Affiliates, Sublicensees, users or any other individual or entity regardless of legal. theory. The above limitations on liability apply even though UM may have been advised of the possibility of such damage.

12.3 Repligen, Affiliates and Sublicensees shall make no statements, representations or warranties or accept any liabilities or responsibilities whatsoever to or with regard to any person or entity which are inconsistent with any disclaimer or limitation included in this Article XII.

XIII. Term and Termination

13.1 Upon any termination of this Agreement, and except as provided herein to the contrary, all rights and obligations of the Parties hereunder shall cease, except as follows:

13.1.1 Obligations to pay royalties and other sums accruing hereunder up to the day of such termination;

13.1.2 The right to complete the manufacture and sale of Licensed Products which qualify as “work in process” under generally accepted cost accounting standards or which are in stock at the date of termination, and the obligation to pay royalties on Net Sales of such Licensed Products;

13.1.3 Obligations for record keeping and accounting reports for so long as Licensed Products are sold pursuant to Paragraph 13.1.2 above. At such time after termination of this Agreement when sales or other dispositions of Licensed Products have ceased, Repligen shall render a final report and royalty payment, if required;

13.1.4 UM’s rights to inspect books and records as described in Article IX;

13.1.5 Obligations of defense and indemnity under Article XI;

13.1.6 Any cause of action or claim of Repligen or UN accrued or to accrue because of any breach or default by the other Party hereunder;

13.1.7 All other terms, provisions, representations, rights and obligations contained in this Agreement that by their sense and context are intended to survive until performance thereof by either or both Parties.

13.2 This Agreement will become effective on its Effective, Date and, unless terminated under another specific provision of this Agreement, will remain in effect until, and terminate upon, the expiration of the last to expire of Licensed Patents.

13.3 Upon any material breach by either Party under this Agreement, the other Party may terminate this Agreement by ninety (90) days’ written notice to the breaching Party, specifying the material breach, default or other defect. Without limiting the generality of the foregoing, any default by Repligen in the payment of any royalty or the making of any report hereunder, or the insolvency of Repligen shall be deemed to be a material breach. The termination shall become effective at the end of the ninety day period unless the breaching Party cures the breach during the ninety (90) day period.

13.4 Notwithstanding anything in this Agreement to the contrary, Repligen may terminate' this Agreement by giving UM a notice of termination, which shall include a statement of the reasons, whatever they may be, for such termination and the termination date established by Repligen, which date shall not be sooner than ninety (90) days after the date of the notice. Such notice shall be deemed by the Parties to be final and, immediately upon receipt of such notice of termination, UM shall have the right to begin negotiations, and enter into agreements, with others for the manufacture, sale, and use of Licensed Products, and may, at its option, disclose to said others any and all information related to Licensed Products which UM, in its sole discretion, deems appropriate, other than information which is subject to confidentiality under any agreement between UM and Repligen. During the period of time from the notice of termination until termination pursuant to this provision, Repligen shall continue any efforts ongoing immediately prior to the termination notice to manufacture and sell Licensed Products.

XIV. Governing Law and Venue

This Agreement and the relationships between the Parties shall be governed in all respects by the law of the State of Michigan (notwithstanding any provisions governing conflict of laws under such Michigan law to the contrary), except that questions affecting the construction and effect to any patent shall be determined by the law of the country in which the patent has been granted. The Parties understand and expressly agree that any claims, demands, or actions asserted against the Regents of the University of Michigan, its agents or employees, shall be brought in the appropriate court of the State of Michigan.

XV. Assignment and Non-Pledge for Security

Due to the unique relationship between, the Parties, this Agreement shall not be assignable by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld; and any attempt to assign this Agreement without such consent shall be void from the beginning. Notwithstanding the foregoing, Repligen may assign this Agreement without UM's consent to any assignee or purchaser of all or substantially all of Repligen's business provided the intended assignee agrees in writing to accept all of the terms and condition of this Agreement. Further, Repligen shall refrain from pledging any of the license rights granted in this Agreement as security for any creditor.

XVI. Registration or Recordation

16.1 If the terms of this Agreement, or any assignment or license under this Agreement are or become such as to require that the Agreement or license or any part thereof be registered with or reported to a national or supranational agency of any area in which Repligen, Affiliates or Sublicensees would do business, Repligen will, at its expense, undertake such registration or report. Prompt notice and appropriate verification of the act of registration or report of any agency ruling resulting from it will be supplied by Repligen to UM.

16.2 Any formal recordation of this Agreement or any license herein granted which is required by the law of any country as a prerequisite to enforceability of the Agreement or license in the courts of any such country or for other reasons shall also be carried out by Repligen at its expense, and appropriately verified proof of recordation shall be promptly furnished to UM.

XVII. Export Laws and Regulations of the United States

17.1 The Export Regulations of the United States Department of Commerce prohibit the exportation from the United States of certain types of technical data and commodities (listed in the Export Administration Regulations), unless the exporter (e.g., Repligen, Affiliates or Sublicensees) has received the required General License or Validated License, whichever is applicable. In addition, the exporter may be required to obtain certain, written assurances regarding re-export from the foreign importer for certain types of technical data and commodities. Prior to its engaging in any export activity, Repligen has advised UM that it will receive a copy of the then current Export Administration Regulations of the United States Department of Commerce and will arrange for a subscription under which it will receive Supplementary Bulletins from the United States Department of Commerce upon their issuance. Should the Export Administration Regulations apply to the activities contemplated under this Agreement, Repligen hereby agrees to comply with, and to require Affiliates to comply with the Export Administration Regulations of the United States Department of Commerce and Repligen hereby gives UM the assurances called for in the Export Administration Regulations, including the assurances called for in Part 779.4 and any successor provisions of such regulations.

17.2 This Agreement shall by subject to all United States Government laws and regulations now or hereafter applicable to the subject matter of this Agreement.

XVIII. NOTICES

Any notice, request, report, or payment required or permitted to be given or made under this Agreement by any Party shall be given by sending such notice by certified mail, return receipt requested, to the address set forth below or such other address as such party shall have specified by written notice given in conformity herewith. Any notice not so given shall not be valid unless and until actually received, and any notice given in accordance with the provisions of this section shall be effective when mailed to:

Notices to Repligen shall be addressed to:

Repligen Corporation
One Kendall Square
Building 700
Cambridge, Massachusetts 02139
Attention: Mr. Sandford D. Smith

(with a copy to:)

Choate, Hall & Stewart
Exchange Place
53 State Street
Boston, Massachusetts 02139
Attention: John M. Cornish, Esq.

Notices to UM shall be addressed to:

The University of Michigan
Intellectual Properties Office
475 East Jefferson Street, Room 2354
Ann Arbor, Michigan 48109-1248
Attention: File #377

XIX. Invalidity

In the event that any term, provision, or covenant of this Agreement shall be determined by a court of competent jurisdiction to be invalid, illegal, or unenforceable, that term will be curtailed, limited, or deleted, but only to the extent necessary to remove such invalidity, illegality, or unenforceability, and the remaining terms, provisions, and covenants shall not in any way be affected or impaired thereby. In the event that the time period of any covenant shall be held unenforceable as a matter of law, said covenant will be interpreted to be effective for an enforceable time period.

XX. Entire Agreement and Amendment

This Agreement contains the entire understandings of the Parties with respect to the matter contained herein, and supersedes all prior agreements, oral or written, and all other communication between them relating to the subject matter hereof. The Parties hereto may, from time to time during the continuance of this Agreement, modify, vary or alter any of the provisions of this Agreement, but only by an instrument duly executed by authorized officials of both Parties hereto.

XXI. Publicity

21.1 Each Party agrees to refrain from using (and in the case of Repligen to require Affiliates and Sublicensees to refrain from using) the name of the other Party in publicity or advertising without the prior written approval of the other Party. Reports in scientific literature and presentations of joint research and development work are not considered publicity. If a Party wishes to use the name of the other Party in financial disclosures, such Party must obtain prior written approval from the other Party, which approval will not be unreasonably withheld.

21.2 Any announcements or similar publicity with respect to this Agreement or the transactions contemplated herein shall be at such time and in such manner as UM and Repligen shall mutually agree, provided that nothing herein shall prevent either Party upon notice to the other from making such public announcements as such party’s legal obligations require.

XXII. Bankruptcy

The parties hereto intend that the Agreement shall not be deemed an executory contract under the United States Bankruptcy Code. If during the term of this Agreement, Repligen shall make an assignment for the benefit of creditors, or if proceedings in voluntary or involuntary bankruptcy shall be instituted in behalf of or against Repligen, and not be dismissed within sixty (60) days after such proceedings are instituted, or if a receiver or trustee shall be appointed for the property of Repligen, UM may, at its option, terminate this Agreement and revoke the license herein granted by written notice to Repligen.

XXIII. Financing Statements

Repligen agrees to cooperate with UM in the execution and filing (not earlier than 120 days after execution of this Agreement) of financial statements under the Uniform Commercial Code, and of similar statements, providing notice of this License Agreement, in the United States Patent and Trademark Office, or other federal agency or court as deemed appropriate by UM.

XXIV. Force Majeure

No failure or omission by the Parties hereto in the performance of any obligation of this Agreement shall be deemed a breach of this Agreement or create any liability if the same shall arise from any cause or causes beyond the control of the Parties, including, but not limited to, the following: act of God; acts or Omissions of any government; any rules, regulations or orders issued by any governmental authority or by any officer, department, agency or instrumentality thereof; fire; storm; flood; earthquake; accident; war; rebellion; insurrection; riot; invasion; strikes, and lockouts and provided that such failure or omission resulting from one of the above causes is cured as soon as is practicable after the occurrence of one or more of the above-mentioned causes.

XXV. Product Marking

Repligen agrees to mark, and to require Affiliates and Sublicensees to mark, Licensed Products with the appropriate patent notice as approved by UM, such approval not to be unreasonably withheld.

XXVI. Non-Waiver

No waiver, other than as agreed to in writing by the Parties, no matter how long continuing or how many times extended, by either Party of a breach of any term or condition of this Agreement shall be considered as a permanent waiver or as an amendment to this instrument.

XXVII. Article Headings

The Article headings herein are for purposes of convenient reference only and shall not be used to construe or modify the terms written in the text of this Agreement.

XXVIII. No Agency Relationship

Except as clearly and specifically provided under the terms and provisions of this Agreement, neither Party shall be deemed to be an agent of the other in connection with the exercise of any rights hereunder, and neither shall have any right or authority to assume or create any obligation or responsibility on behalf of the other.

XXVIX. Repligen Represents and Warrants

Repligen represents and warrants to UM that it has not entered into any agreement with any third party in connection with the Licensed Patents, and that in future it will not enter into any' such agreement which conflicts or interferes with the terms of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

FOR REPLIGEN CORPORATION		FOR THE REGENTS OF THE UNIVERSITY OF MICHIGAN	
By	/s/ Sandford D. Smith	By	/s/ Anne C. Di Sante
	(authorized representative)		(authorized representative)
Typed Name	Sandford D. Smith	Typed Name	Anne C. Di Sante
Title	President & CEO	Title	Acting Director, Intellectual Properties
Date	May 28, 1992	Date	May 28, 1992

APPENDIX A

LICENSED PATENTS

UM's joint ownership interest in U.S. Patent Application Serial Number 275,433	—	Immunotherapy Involving CD28 Stimulation
UM's joint ownership interest in the Continuation—in-Part filed as U.S. Patent Application Unofficial Serial, Number 07/864,805	—	CD28 Pathway Immunoregulation
UM's joint ownership interest in the Continuation-in-Part filed as U.S. Patent Application Unofficial. Serial Number 07/864, 866	—	Enhancement of CD28-Regulated Immune Response

Exhibit C

Dana Farber Cancer Institute Agreement

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [*]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

LICENSING AGREEMENT

Agreement ("AGREEMENT"), effective as of July 20, 1993 ("Effective Date") between REPLIGEN CORPORATION, a Delaware corporation, with its principal place of business at One Kendall Square, Building 700, Cambridge, Massachusetts 02139 (hereinafter referred to as "Repligen") and the DANA-FARBER CANCER INSTITUTE, INC., a Massachusetts non-profit corporation, with its principal place of business at 44 Binney Street, Boston, Massachusetts, 02115 (hereinafter referred to as "DFCI").

WITNESSETH:

WHEREAS, DFCI is the owner of certain rights in technology as later defined herein, subject only to (i) a royalty-free, nonexclusive license heretofore granted to the United States Government, and (ii) certain rights granted to Coulter Corporation which are described herein;

WHEREAS, DFCI desires to have its rights utilized to promote the public interest by granting a license thereunder;

WHEREAS, Repligen has represented to DFCI that Repligen is experienced in the development and production of products similar to the technology which is the subject of this AGREEMENT and has the financial capacity and strategic commitment to facilitate the transfer of such technology for the public interest; and

WHEREAS, Repligen desires to obtain a license to said rights upon the terms and conditions hereinafter set forth.

NOW THEREFORE, in consideration of the mutual covenants herein contained and intending to be legally bound hereby, the parties hereto agree as follows:

ARTICLE I - Definitions

1.1 "Inventions" shall mean all discoveries, inventions, concepts, ideas or tangible property in which DFCI has any proprietary interest, whether patentable or not, made, conceived or reduced to practice pursuant to the Research Agreement, including, but not limited to processes, methods, formulas, techniques, antibodies, vectors, plasmids and host cells.

1.2 "Technical Information" shall mean all Inventions not covered by Patent Rights.

1.3 "Patent Rights" shall mean (i) the patents and patent applications listed in Appendix A, (ii) any other existing or future patent or patent application arising from any

Invention, and (iii) all foreign equivalent patents and patent applications, including Patent Cooperation Treaty filings, and all patents issuing therefrom, any divisions, continuations, or continuations-in-part of the patents or patent applications set forth above, including any reissue, reexamination or extension, any extended or restored term, and any confirmation patent, registration patent or patent of addition. DFCI shall promptly notify Repligen, from time to time as new patent applications are made or patents issued which fall within the definition of Patent Rights and Appendix A shall be appropriately updated to reflect such changes.

1.4 “Licensed Products” shall mean any product whose manufacture, use or sale in any country would, but for either ownership of or a license under the Patent Rights, comprise an infringement of one or more Valid Claims in such country.

1.5 “Territory” shall mean all countries of the world.

1.6 “Net Sales” shall mean the gross income derived by Repligen or its Affiliates from the sales of Licensed Products to independent third parties less:

(a) Transportation and insurance charges or allowances actually paid or granted;

(b) Trade, quantity, cash or other discounts and brokers’ or agents’ commissions, if any, allowed and paid by Repligen or its Affiliates to independent parties in arms-length transactions;

(c) Credits or allowances made or given on account of rejects, returns or retroactive price reductions;

(d) Any tax, customs duty or governmental charge directly on sale or transportation, use or delivery of products paid by Repligen or its Affiliates and not recovered from the purchaser;

(e) Uncollected invoices for Licensed Products to the extent written off as uncollectible by Repligen or its Affiliates;

(f) The cost of devices for dispensing or administering Licensed Products or of diluents or similar exogenous materials which accompany Licensed Products when sold; and

(g) The cost of special packaging of Licensed Products.

Licensed Products shall be considered “sold” when invoiced.

1.7 “Sublicensee” shall mean any corporation, partnership or business organization which is not an Affiliate and which is sublicensed by Repligen to practice the Patent Rights.

1.8 “Affiliate” shall mean any corporation or other business entity controlled by, controlling, or under common control with Repligen. For this purpose “control” means direct or indirect beneficial ownership of at least a fifty percent (50%) interest in the income or stock of such corporation or other business.

1.9 “Valid Claims” shall mean any claim(s) pending in a patent application or in an unexpired patent included within the Patent Rights which has not been held unenforceable, unpatentable, 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 admitted to be invalid or unenforceable through reissue or disclaimer. If in any country there should be two or more such decisions conflicting with respect to the validity of the same claim, the decision of the higher or highest tribunal shall thereafter control; however, should the tribunals be of equal rank, then the decision or decisions upholding the claim shall prevail when the conflicting decisions are equal in number, and the majority of decisions shall prevail when the conflicting decisions are unequal in number.

1.10 “Research Agreement” shall mean the Collaborative Research, Research Support, and License Option Agreement between DFCI and Repligen effective as of February 15, 1992, as amended and as the same may be hereafter amended.

1.11 “Field” shall mean (i) all therapeutic and prophylactic applications, and (ii) all diagnostic applications and research reagent applications which are included in the Field pursuant to Section 9.3 of this AGREEMENT.

1.12 “Coulter” shall mean Coulter Corporation, a corporation with offices at 440 West 20th Street, Hialeah, Florida.

ARTICLE II - Grant

2.1 DFCI hereby grants to Repligen, subject to all the terms and conditions of this AGREEMENT including the nonexclusive license heretofore granted to the United States Government, an exclusive right and license in the Field under the Patent Rights to make, have made, use, lease and sell the Licensed Products in the Territory for the term of this AGREEMENT unless this grant is sooner terminated according to the terms hereof. DFCI also hereby grants to Repligen an exclusive royalty-free right and license in the Field under the Technical Information to make, have made, use, lease and sell products of any nature in the Territory for the term of this AGREEMENT unless this grant is sooner terminated according to the terms hereof.

2.2 Notwithstanding the provisions of Section 2.1, DFCI shall retain the right to use and practice the Patent Rights and Technical Information for its own non-commercial, basic research purposes.

2.3 Repligen agrees that Licensed Products leased or sold in the United States shall be manufactured substantially in the United States.

2.4 (a) Repligen shall have the right, subject to the terms of this Section, to enter into sublicensing agreements with any entity other than an Affiliate for the rights, privileges and licenses granted hereunder at royalty rates not less than those delineated in Section 4.2 hereof. DFCI shall be informed by written notice of the identity of any prospective Sublicensee.

(b) Repligen agrees that any sublicenses granted by it shall provide that the obligations to DFCI contained in this AGREEMENT shall be binding upon the Sublicensee. Repligen further agrees to attach a copy of this AGREEMENT to sublicense agreements.

(c) From any royalties received from its Sublicensee, Repligen shall pay DFCI an amount equivalent to [*] of such royalties, except that with respect to Net Sales of Sublicensee(s) upon which Repligen is being paid a royalty by Sublicensee(s) of less than [*] of such Net Sales, the following formula shall be applied to determine the royalty payment to DFCI. DFCI's royalty will be equal to such Net Sales of Sublicensee multiplied by a royalty rate of "R" percent where R = [*] - [*] * ([*] - x) and "x" can be a maximum of [*] and a minimum of [*] and is the percentage rate of royalty paid by Sublicensee(s) to Repligen on the above described Net Sales. For example, if a particular Sublicensee is paying Repligen a royalty of [*] for Net Sales of a particular Licensed Product, then DFCI receives a royalty from Repligen equal to [*] of such Net Sales ([*] minus one-eighth of the difference between [*] and [*]). The formula is intended to gradually reduce DFCI's royalty below [*] for Net Sales of Sublicensee(s) who are themselves paying a royalty of less than [*] on such Net Sales, and it establishes [*] as a minimum royalty rate to DFCI for such Net Sales by Sublicensee(s). Reporting and payment of such royalties shall be made in accordance with the provision of Article IV and V.

(d) In addition, in the case of any sublicense agreement executed pursuant to Section 2.4(a) within two (2) years of the Effective Date, if the payments received by Repligen in consideration for the grant of such sublicense exceed Repligen's total investment in the rights so sublicensed, Repligen shall pay to DFCI an amount equal to [*] of such excess. For the purpose hereof, payments received in consideration for the

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

grant of a sublicense shall not include earned royalty payments, payments in consideration for the performance of services or the transfer of tangible property or payments due upon the achievement of research, clinical, or development milestones, and shall include payments received in consideration of the issuance of Repligen stock to the Sublicensee simultaneously with the grant of such sublicense only to the extent that the issue price exceeds [*] of the then market price of Repligen stock.

(e) Repligen agrees to forward to DFCI a copy of any and all fully executed sublicense agreements, and further agrees to forward to DFCI annually a copy of such reports received by Repligen from its Sublicensees during the preceding twelve (12) month period under the sublicenses as shall be pertinent to a royalty accounting under said sublicense agreements.

(f) Repligen hereby agrees that every sublicensing agreement to which it shall be a party and which shall relate to the rights, privileges and license granted hereunder shall contain a statement setting forth the date upon which Repligen's exclusive rights, privileges and license hereunder shall terminate.

ARTICLE III - Due Diligence

3.1 Repligen agrees to use its best efforts to bring one or more Licensed Products to the marketplace through a diligent program of development, production and distribution. For the purpose hereof, "best efforts" shall mean the usual practice followed by Repligen in pursuing commercialization of its products. Repligen shall be deemed to have satisfied its obligation under this Section 3 in each year that it expends (or its Sublicensees expend) at least $1,000,000 on the research, development or commercialization of Licensed Products.

3.2 Repligen's failure to perform in accordance with Section 3.1 shall be grounds for DFCI to terminate pursuant to Section 7.5 of this AGREEMENT. It is understood that termination shall be DFCI's sole and exclusive remedy for any such failure to perform.

3.3 Upon written request from DFCI, Repligen shall provide an annual report on its development efforts, which report shall cite specific goals and objectives in commercializing the Licensed Products and progress in meeting these goals and objectives.

3.4 If DFCI believes that one or more Licensed Product candidates could be pursued by Repligen in one or more portions of the Field, and Repligen is not actively

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

pursuing such candidates in such portions of the Field, DFCI may by notice to Repligen request that Repligen pursue such candidates in such portions of the Field. If Repligen does not comply with DFCI's request, Repligen and DFCI will discuss the sublicensing of such candidate to a third party in such portion of the Field. However, the decision as to whether to grant any such sublicense shall be made by Repligen alone, and Repligen shall have no obligation to pursue or sublicense such candidate provided that Repligen is in compliance with its obligations under Section 3.1.

ARTICLE IV - Payments

4.1. In partial consideration for the license granted hereunder, Repligen is to make certain payments to DFCI under the Research Agreement.

4.2 In partial consideration for the license, granted hereunder, Repligen shall pay royalties to DFCI equal to five percent (5%) of Net Sales.

4.3 Upon termination of the last to expire Patent Right covering a Licensed Product, Repligen's obligation to pay royalties will terminate.

4.4 In the event that a Licensed Product under this AGREEMENT is sold in a combination product, package or kit containing other active products, then Net Sales for purposes of determining royalty payments on such combination product or package, shall be calculated using the following method, but in no event shall the royalties payable to DFCI be reduced to less than [*] of that provided for in Section 4.2 hereof: By multiplying the net selling price of that combination product or package by the fraction A/A+B, where A is the gross selling price during the royalty-paying period in question of the Licensed Product sold separately, and B is the gross selling price during the royalty period in question of the other active products sold separately. If no separate sales are made of the Licensed Product or of any of the active products in such combination product or package during the royalty-paying period in question, A shall be the gross cost of producing the Licensed Product component of the package, and B shall be the gross cost of producing all other active products in the package.

4.5 (a) If Repligen or an Affiliate is required to pay an unrelated third party a bona fide royalty in a given country in order to sell a Licensed Product in that country, then [*] of that royalty will be deducted from the royalty otherwise payable hereunder for Net Sales of such Licensed Product in that country. In addition, in the event that after the reductions set forth above, the aggregate royalties payable by Repligen and its Affiliates to third parties (including DFCI) with respect to any Licensed Product in any country exceeds [*], then the royalty payable to DFCI hereunder shall be further reduced so that

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

the cumulative royalty percentage for such Licensed Product does not exceed [*]; provided, however, that the royalty payable to DFCI hereunder shall be reduced on a pro rata basis with all other royalties with respect to such Licensed Product which can be so reduced, so that the total cumulative royalty will equal [*], and in no case shall DFCI's royalty due under Section 4.2 be reduced due to this Section 4.5 by more than [*]. Upon the mutual agreement of the parties, the royalty percentage for a particular Licensed Product may be reduced based on specific indications and associated market size and conditions.

(b) Repligen shall permit DFCI to review the economic substance of all arrangements pursuant to which Repligen owes any royalty described in Section 4.5(a). If DFCI believes that any such royalty is not bona fide or the result of arms-length bargaining, it may dispute the same by notice to Repligen. If Repligen and DFCI are unable to resolve such dispute, it shall be arbitrated under Article XI.

4.6 If at any time or from time to time an unrelated third party in any country shall, under right of a compulsory license granted or ordered to be granted by a competent governmental authority, manufacture, use or sell any Licensed Product with respect to which royalties shall be payable pursuant to Section 4.2 hereof, then Repligen, upon notice to DFCI and during the period such compulsory license shall be effective, shall have the right to reduce such royalty to DFCI on each unit of Licensed Product sold in such country to an amount no greater than the amount payable by said third party in consideration of its compulsory license.

4.7 Payment of royalties specified in Section 4.2 shall be made by Repligen to DFCI within forty-five (45) days after March 31, June 30, September 30 and December 31 each year during the term of this AGREEMENT covering the quantity of Licensed Products sold by Repligen during the preceding calendar quarter. The last such payment shall be made within forty-five (45) days after termination of this AGREEMENT.

4.8 All payments to be made under this Article shall be paid in United States dollars in Boston, Massachusetts, or at such other place and in such other way, as DFCI may reasonably designate, without deduction of exchange, collection or other charges.

4.9 Only a single royalty shall be paid with respect to any Licensed Product irrespective of the number of claims of Patent Rights utilized.

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

4.10 In the event that any payment due hereunder is not made when due, the payment shall accrue interest beginning on the first day following the due date as herein specified, calculated at the annual rate of the sum of (a) [*] plus (b) the prime interest rate quoted by the Bank of Boston on the date said payment is due, the interest being compounded on the last day of each calendar quarter, provided that in no event shall said annual rate exceed the maximum legal interest rate in Massachusetts. The payment of such interest shall not foreclose DFCI from exercising any other rights it may have as a consequence of the lateness of any payment.

4.11 The parties acknowledge that at some future time Repligen may wish to purchase from DFCI all of DFCI's right to receive future payments under this Article IV (other than this Section 4.11) (the "Future Payments"). If Repligen desires to purchase the Future Payments, it will give notice to DFCI. Thereupon, the parties will negotiate in good faith with respect to the price and other terms of such purchase, it being understood that the price will be the fair market value of the Future Payments as determined by agreement between the parties. The purchase price may be paid entirely in cash, partly in cash and partly in shares of Repligen common stock as the parties may agree. If the parties are unable to agree upon the price or other terms of the purchase, neither party shall have any liability or obligation to the other as a result of the failure to consummate the purchase of the Future Payments.

ARTICLE V - Reports and Records

5.1 Repligen shall keep true books of account containing, an accurate record of all data necessary for the determination of the amounts payable under Article IV hereof. Said records shall be kept at Repligen's principal place of business or the principal place of business of the appropriate division of Repligen to which this AGREEMENT relates. Said records shall be available for inspection at DFCI's sole expense by a certified public accountant selected by DFCI and reasonably acceptable to Repligen during regular business hours for five (5) years following the end of the calendar year to which they pertain in order for DFCI to ascertain the correctness of any report and/or payment made under this AGREEMENT. There shall be no more than one (1) such inspection in any calendar year. The provisions of this Section 5.1 shall survive termination of this Agreement.

5.2 Within forty-five (45) days after March- 31, June 30, September 30 and December 31, of each year in which this AGREEMENT is in effect, commencing with the first year in which a Licensed Product is sold for commercial purposes, Repligen shall deliver to DFCI full, true and accurate reports of its activities and those of its

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Sublicensee(s), if any, relating to this AGREEMENT during the preceding three month period. These reports shall include at least the following:

(a) Number of Licensed Products manufactured and sold;

(b) Total billings for Licensed Products sold, where applicable;

(c) Deductions applicable to a determination of Net Sales; and

(d) Total royalties due.

5.3 With each such report, Repligen shall pay to DFCI the royalties due and payable as provided for in Section 4.7. If no royalties are due, Repligen shall so report.

ARTICLE VI - Patent Prosecution and Infringement

6.1 Repligen shall have primary responsibility for the preparation, filing, prosecution and maintenance of all patent applications and patents included in the Patent Rights with patent counsel selected by Repligen. Repligen shall furnish to DFCI copies of all documents relevant to the preparation, filing, prosecution or maintenance of the Patent Rights sufficiently in advance of filing to permit review and comment by DFCI. DFCI shall cooperate fully with Repligen in the preparation, filing, prosecution .and maintenance of the Patent Rights, including, without limitation, the execution of all documents necessary for filing with governmental authorities.

6.2 Payment of all fees and costs relating to the filing, prosecution and maintenance of all Patent Rights shall be the responsibility of Repligen whether such fees and costs were incurred before or after the date of this AGREEMENT, provided that Repligen shall have no liability for such fees and costs incurred after the date of this Agreement to the extent properly allocable to Patent Rights licensed to Coulter pursuant to Section 9.3 (a).

6.3 (a) If at any time during the term of this AGREEMENT either party received or obtains evidence of an infringement of a patent included in the Patent Rights, it shall give notice thereof to the other party. Thereupon, Repligen shall have the right, but not the obligation, at its sole expense, to cause such infringement to terminate or to bring a suit or action to compel termination. If Repligen brings such suit, payment of fifty percent (50%) of the royalties which are payable under Article IV hereof shall be waived so long as such infringement continues.

(b) If Repligen fails to cause such infringement to terminate or to bring a suit or action to compel termination within six (6) months of the notice provided under Section 6.3(a), or if before said six (6) months expires Repligen notifies DFCI that it does not intend to take any such action, DFCI shall have the right, but not the obligation, at its sole expense to bring such suit or action to compel termination.

(c) No settlement, consent judgment or other voluntary final disposition of any suit under Section 6.3(a) or (b) may be entered into without the consent of DFCI and Repligen, which consent shall not unreasonably be withheld. Any damages recovered by such suit or action shall be first used to reimburse each party hereto for the cost of such suit or action (including attorney's fees) actually paid by each party hereto as the case may be, then to reimburse DFCI for any royalties waived under Section 6.3(a). The residue, if any; of any suit or action under this Section 6.3 shall be paid seventy-five percent (75%) to the party that initiated such suit or action, and twenty-five percent (25%) to the other party.

6.4 In the event that a declaratory judgment-action alleging invalidity or non-infringement of any of the Patent Rights shall be brought against DFCI, Repligen at its sole option, shall have the right, within thirty (30) days after commencement of such action, to intervene and take over the sole defense of the action at its own expense.

6.5 In any infringement suit as either party may institute to enforce the Patent Rights pursuant to this AGREEMENT, the other party hereto shall, at the request and expense of the party initiating such suit, be joined as a party to such suit and cooperate in all respects and, to the extent possible, have its employees testify when requested and make available relevant records, papers, information, samples and the like.

ARTICLE VII - Term and Termination

7.1 Unless earlier terminated as hereinafter provided, this AGREEMENT shall remain in full force and effect for the life of the last to expire patent issued under the Patent Rights; provided, however, that with respect to any products incorporating Technical Information, the AGREEMENT shall extend for so long as any such products are sold by Repligen, its Affiliates or Sublicensees.

7.2 If Repligen shall cease to carry on its business with respect to LICENSED PRODUCTS, the AGREEMENT shall terminate upon notice by DFCI.

7.3 Should Repligen fail to pay DFCI such royalties as are due and payable hereunder, DFCI shall have the right to terminate this AGREEMENT on forty-five (45) days written notice, unless Repligen shall pay DFCI within the forty-five (45) notice period, all such royalties and interest that are due and payable. Upon the expiration of the forty-five (45) day period, if Repligen shall not have paid all such royalties and interest due and payable, DFCI, at its sole option, may immediately terminate this AGREEMENT and all rights, privileges and license hereunder granted.

7.4 Repligen shall have the right to terminate this AGREEMENT at any time upon six (6) months written notice to DFCI, and upon payment of all amounts due DFCI through the effective date of termination. Upon any material breach or default of this AGREEMENT by DFCI, Repligen shall have the right to terminate this AGREEMENT upon ninety (90) days written notice to DFCI. Such termination shall become effective immediately at the conclusion of such notice period unless DFCI shall have cured any such breach or default prior to the expiration of such ninety (90) day period.

7.5 Upon any material breach or default of this AGREEMENT by Repligen, other than those delineated in Sections 7.2 and 7.3 which shall always take precedence in that order over any material breach or default referred to in this Section 7.5, DFCI shall have the right to terminate this AGREEMENT and the rights, privileges and license hereunder granted upon ninety (90) days written notice to Repligen. Such termination shall become effective immediately at the conclusion of such notice period unless Repligen shall have cured any such breach or default prior to the expiration of the ninety (90) day period.

7.6 Upon termination of this AGREEMENT for any reason, nothing herein shall be construed to release either party from any obligation that matured prior to the effective date of such termination. Repligen and any Sublicensee thereof may, after the effective date of such termination, sell all Licensed Products which are in inventory at the time of termination, and complete the production of and sell Licensed Products which Repligen can clearly demonstrate were in the process of manufacture at the time of such termination, provided that Repligen shall pay to DFCI the royalties thereon as required by Article IV of this AGREEMENT and shall submit the reports required by Article V hereof on the sales of Licensed Products.

7.7 Upon termination of this AGREEMENT for any reason, any sublicense not then in default shall continue in full force and effect except that DFCI shall be substituted in place of the sublicensor.

ARTICLE VIII - Indemnification and Insurance

8.1 Repligen shall indemnify, defend and hold harmless DFCI and its trustees, officers, medical and professional staff, employees, and agents and their respective successors, heirs and assigns (the “Indemnitees”), against any liability, damage, loss or expense (including reasonable attorneys’ fees and expenses of litigation) incurred by or, imposed upon the Indemnitees, or any one of them, in connection with any claims, suits, actions, demands or judgments (a) arising out of the design, production, manufacture, sale, use in commerce, lease, or promotion by Repligen or by a Sublicensee, Affiliate or agent of Repligen, of any product, process or service relating to, or developed pursuant to this AGREEMENT or (b) arising out of any other activities to be carried out pursuant to this AGREEMENT.

8.2 Repligen's indemnification under 8.1 shall not apply to any liability, damage, loss or expense to the extent that it is attributable to (a) the negligent activities of the Indemnitees, or (b) the intentional wrongdoing or intentional misconduct of the Indemnitees.

8.3 At such time as any product, process or service relating to, or developed pursuant to, this AGREEMENT is being commercially distributed or sold (other than for the purpose of obtaining regulatory approvals) by Repligen or by a Sublicensee, Affiliate or agent of Repligen,.Repligen shall, at its sole cost and expense, procure and maintain policies of product liability insurance in amounts not less than $2,000,000 per incident and $2,000,000 annual aggregate and naming DFCI as an additional insured. If Repligen elects to self-insure all or part of the limits described above (including deductibles or retentions which are in excess of $250,000 annual aggregate), such self-insurance program must be acceptable to the DFCI and the DFCI's associated Risk Management Foundation. The minimum amounts of insurance coverage required under these provisions shall not be construed to create a limit of Repligen's liability with respect to its indemnification obligation under Section 8.1 of this AGREEMENT.

8.4 Repligen shall provide DFCI with written evidence of such insurance upon request of DFCI. Repligen shall provide DFCI with written notice at least fifteen (15) days prior to the cancellation, non-renewal or material change in such insurance; if Repligen does not obtain replacement insurance providing comparable coverage within such fifteen (15) day period, or a self-insurance program described in Section 8.3 DFCI shall have the right to terminate this AGREEMENT effective at the end of such fifteen (15) day period upon notice to Repligen.

8.5 Repligen shall maintain such product liability insurance beyond the expiration or termination of this AGREEMENT during (a) the period that any product, process, or service, relating to, or developed pursuant to, this AGREEMENT is being commercially distributed or sold (other than for the purpose of obtaining regulatory approvals) by Repligen or by a licensee, affiliate or agent of Repligen and (b) a reasonable period after the period referred to in 8.5(a) above which in no event shall be less than fifteen (15) years.

8.6 In the event any such action is commenced or claim made or threatened against DFCI or other Indemnitees as to which Repligen may be obligated to indemnify it (them) or hold it (them) harmless, DFCI or the other Indemnitees shall promptly notify Repligen of such event. Repligen shall assume the defense of, and may settle with counsel of its own choice and at its sole expense, that part of any such claim or action commenced or made against DFCI (or other Indemnitees) which relates to Repligen's indemnification, and Repligen may take such other steps as may be necessary to protect itself. Any Indemnitee may participate in the defense of any such claim or action with counsel of its own choice, but the fees and expenses of such counsel shall be borne solely

by such indemnitee. Repligen shall not be liable to DFCI or other Indemnitees on account of any settlement of any such claim or litigation effected without Repligen's prior written consent. The right and obligation of Repligen to assume the defense of any action shall be limited to that part of the action commenced against DFCI and/or Indemnitees which relates to Repligen's obligation of indemnification and holding harmless. Any other part of any such action shall be defended by the Indemnitee at its own cost and expense.

8.7 This Article VIII shall survive expiration or termination of this AGREEMENT.

ARTICLE IX - Representations, Warranties and Other Agreements

9.1 DFCI represents and warrants to Repligen that (i) DFCI is the owner of the Patent Rights and the Technical Information free and clear of claims by any third party except as expressly provided in Section 2.1 and Section 9.2, (ii) DFCI has the full right, power and authority to execute and deliver this AGREEMENT, to grant the licenses provided hereunder, and to perform its obligations hereunder, and (iii) the terms of this AGREEMENT do not conflict with any other agreement, order or judgment to which DFCI is a party or by which it is bound.

9.2 DFCI further represents and warrants to Repligen that Coulter has unconditionally and irrevocably waived any and all rights that it may have to any and all therapeutic and prophylactic applications of the Patent Rights and the Technical Information. In consideration for such waiver, DFCI and Coulter have agreed that (i) Coulter shall have a right to license from DFCI for a limited period of time any B7 related diagnostic product or research reagent product (a) developed, or which could be developed, from the Patent Rights or Technical Information as they exist as of the Effective Date, or (b) developed by DFCI under the Research Agreement, (ii) Coulter shall pay to DPCI a [*] royalty on Coulter's and its affiliates' net sales of any diagnostic products or research reagent product described in clause (i), and (iii) Repligen shall pay to Coulter $250,000 upon the commencement by Repligen of Phase III clinical trials in the United States for each B7 therapeutic product covered by the Patent Rights as they exist on the Effective Date, but in no event more than $1,000,000 in the aggregate.

9.3 In order to effectuate and carry out the terms of the agreement between DFCI and Coulter, DFCI and Repligen agree as follows:

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(a) DFCI shall promptly notify Coulter each time that a patent application is filed covering any B7 related diagnostic product or research reagent product described in clause (i) of Section 9.2, and of Coulter's right to obtain a license under the same for such product. If DFCI and Coulter fail for any reason to enter into a license agreement under such Patent Rights for such product within six months following Coulter's receipt of such notice from DFCI, Coulter's right to obtain such license for such product shall automatically terminate, and such diagnostic or research reagent product shall automatically be included in the Field and exclusively licensed to Repligen pursuant to the terms of this Agreement.

(b) In the event that Coulter shall enter into any license agreement pursuant to Section 9.3(a), DFCI shall provide a copy of such license agreement to Repligen. DFCI shall pay to Repligen an amount equal to [*] of all payments which DFCI is entitled to receive pursuant to each such license agreement, including, without limitation, all upfront, milestone and royalty payments, but excluding any payments for research services rendered by DFCI or out-of-pocket expenses incurred by DFCI, and specifically reimbursed by Coulter.

(c) In the event that Repligen (i) develops any B7 therapeutic product covered by the Patent Rights as they exist on the Effective Date, and (ii) commences Phase III clinical trials in the United States for such product, Repligen shall within sixty days after the commencement of such trials pay to Coulter the sum of $250,000. Repligen's obligations under this Section 9.3(c) shall terminate when payments hereunder have been made with respect to four such products.

9.4 EXCEPT AS EXPRESSLY PROVIDED ABOVE, DFCI MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ANY PATENT, TRADEMARK, SOFTWARE, NON-PUBLIC OR OTHER INFORMATION, OR TANGIBLE RESEARCH PROPERTY, LICENSED OR OTHERWISE PROVIDED TO REPLIGEN HEREUNDER AND HEREBY DISCLAIMS THE SAME.

9.5 DFCI DOES NOT WARRANT THE VALIDITY OF THE PATENT RIGHTS LICENSED HEREUNDER AND MAKES NO REPRESENTATION WHATSOEVER WITH REGARD TO THE SCOPE OF THE LICENSED PATENT RIGHTS OR THAT SUCH PATENT RIGHTS MAY BE EXPLOITED BY LICENSEE, AFFILIATE OR SUBLICENSEE WITHOUT INFRINGING OTHER PATENTS. IF BIOLOGICAL MATERIALS ARE LICENSED HEREUNDER, DFCI MAKES NO REPRESENTATION THAT SUCH MATERIALS OR THE METHODS USED IN

---

[*] Certain information on this page has been omitted and filed separately with the Securities & Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

MAKING OR USING SUCH MATERIALS ARE FREE FROM LIABILITY FOR PATENT INFRINGEMENT.

ARTICLE X - Notices

10.1 Reports, notices and other communications from Repligen to DFCI as provided hereunder shall be sent to:

Dr. Bernard W. Janicki
Director for Research
Dana-Farber Cancer Institute
44 Binney Street
Boston, MA 02115

or other individuals or addresses as shall hereafter be furnished by written notice to Repligen.

10.2 Reports, notices and other communications from DFCI to Repligen as provided hereunder shall be sent to:

Repligen Corporation
One Kendall Square
Building 700
Cambridge, MA 02139
Attention: President

with a copy to:

John M. Cornish, Esq.
Choate, Hall & Stewart
Exchange Place, 53 State Street
Boston, MA 02109

or other individuals or addresses as shall hereafter be furnished by written notice to DFCI.

ARTICLE XI - Arbitration

11.1 Any controversy or claim arising out of, or relating to, any provisions of this AGREEMENT or the breach thereof which cannot otherwise be resolved by good faith negotiations between the parties shall be resolved by final and binding arbitration in Boston, Massachusetts under the rules of the American Arbitration Association, or the Patent Arbitration Rules if applicable, then obtaining. The arbitration shall be subject to the following terms:

(a) The number of arbitrators shall be one (1).

(b) The arbitrator shall be an independent, impartial third party having no direct or indirect personal or financial relationship to any of the parties to the dispute, who has agreed to accept the appointment as arbitrator on the terms set out in this Section 11.1.

(c) The arbitrator shall be an active or retired attorney, law professor, or judicial officer with at least five (5) years experience in general commercial matters and a familiarity with the laws governing proprietary rights in intellectual property.

(d) The arbitrator shall be selected as follows:

(i) Each party shall submit a description of the matter to be arbitrated to the American Arbitration Association at its Regional Office in Boston, Massachusetts. Said Association shall submit to the parties a list of the arbitrators available to arbitrate any dispute between them. Thereafter, each party shall select, in numerical order, those persons on said list acceptable as arbitrators and return the same to the Association. The first arbitrator acceptable to both parties shall be deemed the selected arbitrator with respect to the dispute then at issue under this AGREEMENT. In the event of a failure to select a mutually agreeable arbitrator, the Association shall be requested to submit as many subsequent lists of arbitrators as shall be necessary to effect a mutual selection.

(ii) If the method of selection set out in paragraph (d)(i) fails for any reason, then either party may petition any state or federal court in Massachusetts having jurisdiction for appointment of the arbitrator in accordance with applicable law, provided that the arbitrator must satisfy the requirements of (b) and (c) above.

(e) The arbitrator shall announce the award in writing accompanied by written findings explaining the facts determined in support of the award, and any relevant conclusions of law.

(f) Unless otherwise provided in this Section 11.1 or extended by agreement of the parties, each party shall submit an initial request for designation of an arbitrator within thirty (30) days after any request for arbitration, the dispute shall be submitted to the arbitrator within ninety (90) days after the arbitrator is selected, and a decision shall be rendered within thirty (30) days after the dispute is submitted.

(g) The fees of the arbitrator and any other costs and fees associated with the arbitration shall be paid in accordance with the decision of the arbitrator.

(h) The arbitrator shall have no power to add to, subtract from, or modify any of the terms or conditions of this AGREEMENT. Any award rendered in such arbitration may be enforced by either party in either the courts of the Commonwealth of Massachusetts or in the United States District Court for the District of Massachusetts, to whose jurisdiction for such purposes DFCI and Repligen each hereby irrevocably consents and submits.

11.2 Notwithstanding the foregoing, nothing in this Article shall be construed to waive any rights or timely performance of any obligations existing under this AGREEMENT.

ARTICLE XII - Restrictions on Use of Names

12. Repligen shall not use the names of DFCI, its related entities and its employees, or any adaptations thereof, in any advertising, promotional or sales literature, or in any reports required by the Securities and Exchange Commission (except to the extent that such use is required under applicable securities laws or the rules and regulations thereunder), without the prior written consent of DFCI in each case; provided, however, that Repligen (a) may refer to publications by employees of DFCI in the scientific literature or (b) may state that a license from DFCI has been granted as herein provided.

ARTICLE XIII - Independent Contractor

13. For the purpose of this AGREEMENT and all services to be provided hereunder, both parties shall be, and shall be deemed to be, independent contractors and not agents or employees of the other. Neither party shall have authority to make any statements, representations or commitments of any kind, or to take any action, that will be binding on the other party.

ARTICLE XIV - Severability

14. If any one or more of the provisions of this AGREEMENT shall be held to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions of this AGREEMENT shall not in any way be affected or impaired thereby.

ARTICLE XV - Assignability

15. Neither this AGREEMENT nor any part hereof shall be assignable by either party without the express written consent of the other. Any attempted assignment without such consent shall be void. Notwithstanding the foregoing, Repligen may assign this Agreement without DFCI’s consent to any Affiliate, to any entity (whether or not an Affiliate) formed or availed of to facilitate the research, development, manufacture, use,

or sale of Licensed Products or the financing of the same, or to any assignee or purchaser of all or substantially all of Repligen's business provided the intended assignee agrees in writing to accept all of the terms and conditions of this Agreement.

ARTICLE XVI - Entire AGREEMENT

16. This instrument and the Research Agreement contain the entire AGREEMENT between the parties hereto with respect to the subject matter hereof. No verbal agreement, conversation or representation between any officers, agents, or employees of the parties hereto either before or after the execution of this AGREEMENT shall affect or modify any of the terms or obligations herein contained.

ARTICLE XVII - Modifications in Writing

17. No change, modification, extension, termination or waiver of this AGREEMENT, or any of the provisions herein contained, shall be valid unless made in writing and signed by a duly authorized representative of each party.

ARTICLE XVIII - Governing Law

18. The validity and interpretation of this AGREEMENT and the legal relations of the parties to it shall be governed by the laws of the Commonwealth of Massachusetts.

ARTICLE XIX - Captions

19. The captions are provided for convenience and are not to be used in construing this AGREEMENT.

ARTICLE XIX - Construction

20. The parties agree that they have participated equally in the formation of this AGREEMENT and that the language herein should not be presumptively construed against either of them.

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed in quadruplicate by their duly authorized representatives as of the date first above written.

DANA-FARBER CANCER INSTITUTE (DFCI)	REPLIGEN CORPORATION
By: _____	By: _____
Title: _____	Title: _____
WITNESSED BY: _____	WITNESSED BY: _____

APPENDIX A

PATENT RIGHTS

U.S. Patent Appl. No. 591,300, DNA Encoding B7, a New Member of the IGG Superfamily with Unique Expression on Activated and Neoplastic B Cells, filed on October 1, 1990

U.S. Patent Appl. No. 751,306, a Continuation-in-Part Application involving the same subject matter as No. 591,300, filed on August 28, 1991

Exhibit D

Patents

Serial No.	Title/misc
07/864,807	“Immunotherapy involving stimulation of THCD28 lymphokins production”
07/902,467	“Immunotherapy involving CD28 stimulation”
08/073,223	“Methods for selectively stimulating proliferation of T cells”
08/253,964	“Methods for selectively stimulating proliferation of T cells”
08/253,751	“Methods for selectively stimulating proliferation of T cells”
PCT/US94/06255	“Methods for selectively stimulating proliferation of T cells”
PCT/US94/06701	“CD28 pathway immunosuppression”
08/403,253	“Methods for selectively stimulating proliferation of T cells”
08/435,095	“Methods for Modulating Expression of Exogenous DNA in T cells”
08/453,925	“Methods for selectively stimulating proliferation of T cells”
08/475,136	“Improved methods for Transfecting T Cells
08/435,816	“Methods for selectively stimulating proliferation of T cells”
08/477,165	“Immunotherapy Involving Stimulation of THCD28 Lymphokine Production”
08/476,818	“Methods for selectively stimulating proliferation of T cells”
08/435,518	“Methods for enhancing T cells survival by augmenting bci-XL, protein level”
08/481,739	“Methods for enhancing T cells survival by augmenting bci-XL, protein level”
PCT/US94/13782	“Methods for selectively stimulating proliferation of T cells”
PCT/US96/06203	“Methods for enhancing T cells survival by augmenting bci-XL, protein level”
PCT/US96/06200	“Improved Methods for transfecting T cells”
08/592,711	“Methods for selectively stimulating proliferation of T cells”

Schedule 6.1

Exceptions to Patents Warranty

None

Exhibit 10.36

AMENDMENT NO. 1 TO LICENSE AGREEMENT

This Amendment No. 1 to License Agreement (the "Amendment") is effective as of April 10, 2003, by and between Xcyte Therapies, Inc., a Delaware corporation (the "Company") and Genetics Institute, L.L.C. (formerly Genetics Institute, Inc.) ("GI).

RECITALS

WHEREAS, the Company and GI wish to amend the License Agreement dated June 24, 1998 by and between the Company and Wyeth (the "Original Agreement") in order to clarify the intentions of the parties as to the Field of use.

WHEREAS, the definition of "Field" in section 2.5 of the Agreement currently reads as follows: **"Field"** means *ex vivo* activation or expansion of human T-cells (including T-cells modified through gene transfer (except as indicated below) or otherwise) for treatment and/or prevention of infectious diseases (including, without limitation, AIDS), cancer and immunodeficiency states. It is understood and agreed that the Field shall not include activation or expansion of T-cells modified through gene transfer to specifically modify the T-cells to produce secreted or cell-surface membrane-bound proteins not normally expressed in significant levels by such T-cells, unless the cell-surface membrane-bound proteins bind the T-cell to specific target cells."

WHEREAS, the parties wish to amend the definition of the "Field" to clarify the Company's ability to practice gene therapy as intended under the Original Agreement (using T cells as therapeutic agents to treat cancer, infectious diseases and immunodeficiency states) while retaining GI's ability to use the technology for gene replacement therapy, including replacement of factor VIII, factor IX and insulin.

All terms not otherwise defined herein shall have the same meaning as set forth in the Original Agreement.

NOW THEREFORE, the parties hereby agree as follows:

AGREEMENT

1. Section 2.5 of the Original Agreement is hereby amended and restated as follows (changed language is in bold for effect only):

"Field" means *ex vivo* activation or expansion of human T-cells (including T-cells modified through gene transfer (except as indicated below) or otherwise) for treatment and/or prevention of infectious diseases (including, without limitation, AIDS), cancer and immunodeficiency states. It is understood and agreed that the Field shall not include activation or expansion of T-cells modified through gene transfer to specifically modify the T-cells to produce secreted or cell-surface membrane-bound proteins not normally expressed in significant levels by such T-cells, unless the **proteins directly enable the selection, or directly modify or preserve the function, of the T cells.**

2. All other terms and conditions of the Original Agreement shall remain unchanged and in full force and effect.

The parties have executed this Amendment No. 1 to the License Agreement as of the date first above written.

XCYTE THERAPIES, INC.

By: /s/ RONALD JAY BERENSON

Name: Ronald Jay Berenson, MD

(print)

Title: President and CEO

Address: 1124 Columbia Street, Suite 130

Seattle, WA 98033

Genetics Institute, L.L.C.

By: /s/ RONALD W. ALICE

Name: Ronald W. Alice

(print)

Title: Vice President

Address: 150 A-3 North Radmor-Chaster Rd.

St. Davids, PA 19087

Exhibit 10.37

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [*****]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

NON-EXCLUSIVE LICENSE AGREEMENT

This Agreement is entered into as of the 20th day of October, 1999 ("Effective Date") by and between the Fred Hutchinson Cancer Research Center, a Washington non-profit corporation ("FHCRC") and Xcyte Therapies, Inc ("LICENSEE"), a Delaware corporation having a place of business at 2203 Airport Way S., Suite 300, Seattle, Washington 98134. All references to LICENSEE shall include its AFFILIATES.

RECITALS

A. FHCRC has developed and owns the valuable **[*]**;

B. FHCRC is committed to a policy that ideas or creative works produced at FHCRC should be used for the greatest possible public benefit and believes that every reasonable incentive should be provided for the prompt introduction of such ideas into public use, all in a manner consistent with the public interest;

C. LICENSEE desires to obtain a worldwide license in and to the above-referenced rights; and

D. FHCRC is willing to grant such a license to LICENSEE subject to the terms and conditions of this Agreement.

TERMS AND CONDITIONS

The parties agree as follows:

ARTICLE 1 - DEFINITIONS

1.1 "AFFILIATE" shall mean any corporation or other entity which is directly or indirectly controlling, controlled by or under the common control with a party hereto which has agreed in writing to be bound by the terms of this Agreement. For the purpose of this Agreement, "control" shall mean the direct or indirect ownership of at least thirty percent (30%) of the outstanding shares or other voting rights of the subject entity to elect directors, or if not meeting the preceding, any entity owned or controlled by or owning or controlling at the maximum control or ownership right permitted in the country where such entity exists. "Affiliates" includes only Affiliates of LICENSEE and does not include Affiliates of LICENSEE's Affiliates.

1.2 "LICENSED CELL LINE" means the **[*]** and all progeny, clones, derivatives and modifications thereof. Such derivatives and modifications shall not include antibodies which are not derived from or developed using the Licensed Materials and which have been entirely made with the use of information or materials available in the public domain.

1.3 "LICENSED MONOCLONAL ANTIBODY" means the monoclonal antibody **[*]** and antigen binding fragments thereof, produced by or derived from the licensed CELL LINE.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.4 “LICENSED PRODUCTS” means any product, including reagents, devices, kits and packages that contain, or are derived from, or result from the use of the LICENSED MONOCLONAL ANTIBODY including without limitation beads coated with the LICENSED MONOCLONAL ANTIBODY either by itself or in combination with other antibodies. LICENSED PRODUCTS does not include the LICENSED CELL LINE.

1.5 “LICENSED SERVICES” means any service performed for a third party using a LICENSED PRODUCT or the LICENSED MONOCLONAL ANTIBODY. Services performed on biological materials from a single patient which are clinically defined to constitute a single course of treatment shall constitute the performance of a single LICENSED SERVICE procedure for purposes of Section 5.2 of this Agreement.

1.6 “FIELD” means any ex-vivo use for human prophylactic, therapeutic and research applications, excluding cell separation and selection applications.

1.7 “NET SALES” means the amount actually received by LICENSEE and its AFFILIATES or sublicensees on sales of LICENSED PRODUCTS and LICENSED SERVICES less:

(a) Customary trade, quantity or cash discounts and non-affiliated brokers’ or agents’ commissions actually allowed and taken;

(b) Amounts repaid or credited by reason of rejection or return; and/or

(c) To the extent separately stated on purchase orders, invoices or other documents of sales, taxes levied on and/or other governmental charges made as to production, sale, transportation, delivery or use and paid by or on behalf of LICENSEE; and/or Import and I or export duties actually paid.

(d) NET SALES shall include all consideration received for a sale and shall be based on the usual full arms length third party price in the event that LICENSED PRODUCT is transferred at a lower sum.

ARTICLE 2 - GRANT

2.1 Non-Exclusive License. FHCRC hereby grants to LICENSEE and LICENSEE accepts subject to the terms and conditions hereof the following licenses:

(a) a non-exclusive license to use, possess, culture and employ the LICENSED CELL LINE at its business premises solely in the United States;

(b) a worldwide, non-exclusive license to the LICENSED MONOCLONAL ANTIBODY to make and have made, to use, to sell, have sold and offer for sale the LICENSED PRODUCTS and the LICENSED SERVICES in the FIELD for the term of this Agreement (collectively the “Licenses”). Notwithstanding any other provision of this Agreement, (1) LICENSEE and its Affiliates shall not use the LICENSED CELL LINE or LICENSED MONOCLONAL ANTIBODY for any purpose other than that expressly described in this Agreement (2) shall not transfer the LICENSED CELL LINE to any third party or AFFILIATE for any purpose except to a sublicensee as provided in Section

2.2(a) of this Agreement and (3) shall in no event transfer the LICENSED CELL LINE outside of the United States.

2.2 Sublicensing

(a) LICENSEE shall have no right or power to grant sublicenses of the LICENSED CELL LINE, under section 21. (a), except LICENSEE shall have the right to sublicense third parties to make the LICENSED MONOCLONAL ANTIBODY on behalf of LICENSEE solely for the use of LICENSEE, its AFFILIATES and sublicensees subject to FHCRC's prior written consent, which consent shall not be unreasonably withheld. If FHCRC does not respond in thirty (30) days to written request for consent from LICENSEE, such non-response shall constitute consent by FHCRC hereunder. In addition to any other requirements imposed under this Agreement, a sublicense of the LICENSED CELL LINE shall require that the LICENSED CELL LINE be maintained in and not transferred from the United States and will prohibit the sublicensee from sublicensing or otherwise transferring the LICENSED CELL LINE to any other person or entity. Upon the prior written approval of FHCRC, which shall not be unreasonably withheld, LICENSEE may sublicense on third party to make the LICENSED MONOCLONAL ANTIBODY in Europe on behalf of LICENSEE solely for the use of LICENSEE, its AFFILIATES and sublicensees upon terms and conditions agreeable to FHCRC. A determination by FHCRC that a sublicense will affect adversely its rights in the LICENSED CELL LINE or the LICENSED MONOCLONAL ANTIBODY or its ability to enforce those rights shall be deemed a reasonable basis to withhold consent to that sublicense for purposes of this Section 2.2(a).

(b) LICENSEE may grant and authorize sublicenses to permit third parties to perform LICENSED SERVICES and to make, have made, use and sell LICENSED PRODUCTS (but not the LICENSED CELL LINE) within the scope of the License described in Section 2.1(b) of this Agreement with FHCRC's prior written consent, which consent will not be unreasonably withheld. If FHCRC does not respond in thirty (30) days to written request for consent from LICENSEE, such non-response shall constitute consent by FHCRC hereunder. All sublicenses granted by LICENSEE under this Section 2.2 (b) shall include a requirement that the sublicensesee use reasonable efforts to introduce the LICENSED PRODUCTS into the commercial market as soon as reasonably possible, consistent with sound and reasonable business practices and judgment, and thereafter endeavor to keep LICENSED PRODUCTS reasonably available to the public.

(c) In addition to any other requirements of this Agreement, any sublicense agreement under this Section 2.2 shall bind the sublicensee to meet all LICENSEE's obligations to FHCRC under this Agreement. Royalties charged for sublicenses by LICENSEE shall be commercially reasonable. LICENSEE shall promptly provide FHCRC with a copy of any sublicense agreement subject to the confidentiality provisions of Article 10 of this Agreement.

(d) Notwithstanding 2.2 (a)-(c), LICENSEE may transfer the LICENSED MONOCLONAL ANTIBODY to third parties, and if required by such third party,

sublicense the LICENSED MONOCLONAL ANTIBODY for the purpose of testing, analysis, development or manufacturing of LICENSED PRODUCTS or LICENSED SERVICES to be sold or offered for sale by LICENSEE or authorized sublicensees; provided that the third party to whom the transfer is made has agreed (1) in writing to use the LICENSED MONOCLONAL ANTIBODY solely for that limited purpose and has agreed (2) not to make, use or sell or offer for sale or otherwise distribute or exploit the LICENSED MONOCLONAL ANTIBODY or any LICENSED PRODUCT or LICENSED SERVICE and (3) to be bound by the Confidentiality provisions in Article 10 of this Agreement.

2.3 Restrictions on License. Notwithstanding any other provision of this Agreement, the License is subject to the following policies, obligations and/or conditions:

(a) FHCRC's Patents and Inventions Policy adopted September 30, 1983, Public Laws 96-517 and 98-620 and FHCRC's obligations under agreement with other sponsors of research. Any right granted in this Agreement greater than that permitted under Public Laws 96-5 17 or 98-620 shall be subject to modification as may be required to conform to the provisions of the statutes.

(b) LICENSEE agrees during the term of the License that any LICENSED MONOCLONAL ANTIBODY produced for sale in the United States will be manufactured substantially in the United States.

ARTICLE 3 - TERM OF AGREEMENT

3.1 Term. The term of this Agreement commences on the Effective Date and, subject to earlier termination as provided in Article 9, shall remain in effect for fifteen (15) years following the first sale of a LICENSED PRODUCT or LICENSED SERVICE by LICENSEE to a customer who is not an AFFILIATE or sublicensee ("First Commercial Sale"). Upon expiration of the term, provided LICENSEE is not in material breach of this Agreement, the licenses granted LICENSEE under this Agreement shall be deemed fully paid-up.

ARTICLE 4 - DELIVERY OF LICENSED MATERIAL

4.1 Delivery of **[*]**. Within thirty (30) days of receipt by FHCRC of any Signing Fee owed under this Agreement, the Effective Date, FHCRC shall provide to LICENSEE three (3) vials of the **[*]** cell line from the Manufacturer's Working Cell Bank ("MWCB").

4.2 Replacement of **[*]**. If the **[*]** cell line dies during the Term of this Agreement, FHCRC will, after it has been reimbursed its reasonable costs and expenses by LICENSEE, and no more than two occasions during the Term, provide to LICENSEE sufficient quantities of additional seed stock from the MWCB to replace the cell line, but in no event more then a total of two additional vials.

4.3 Antibody Production. The parties acknowledge that LICENSEE has contracted with FHCRC for production and supply of the **[*]** monoclonal antibody pursuant to a Laboratory Services Agreement dated even herewith.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

ARTICLE 5 - PAYMENTS

5.1 Signing Fee. LICENSEE shall pay to FHCRC a non-refundable signing fee in the sum of Fifty Thousand Dollars ($50,000). FHCRC acknowledges receipt of Twenty Five Thousand Dollars ($25,000.00). The remaining Twenty Five Thousand Dollars shall be due and payable within five (5) days of the execution of this Agreement.

5.2 Earned Royalties. LICENSEE shall pay to FHCRC a royalty in the amount of **[*]** of the NET SALES of all LICENSED PRODUCTS, and **[*]** of the NET SALES of all LICENSED SERVICES sold by LICENSEE during the Term. The royalty payable with respect to the performance of a single LICENSED SERVICE procedure shall not exceed **[*]** per single LICENSED SERVICE procedure (the "LICENSED SERVICES Royalty Cap") for a period of three (3) years following the date of the first commercial sale of LICENSED SERVICE hereunder. Thereafter, the LICENSED SERVICES Royalty Cap shall increase at the rate of **[*]** per calendar year. LICENSEE shall also pay FHCRC a) **[*]** of all non-royalty consideration other than equity and **[*]** of all non-royalty consideration which is equity received as a result of a sublicense of LICENSED SERVICES, b) and **[*]** of all non-royalty consideration received as a result of a sublicense of LICENSED PRODUCTS, all within thirty (30) days of receipt of such consideration; provided, however, that to the extent the non-royalty consideration received as a result of a sublicense is paid to LICENSEE as funding for a specific research project, LICENSEE may at its option elect to give FHCRC a negotiable promissory note in the principal

5.3 Combined Products. In the event that any of the LICENSED PRODUCTS or LICENSED SERVICES are used or sold by LICENSEE in combination as a single product or service with one or more other product(s) or service(s) whose sale and/or use are not within the scope of the this Agreement, and do not entail the use of the LICENSED MONOCLONAL ANTIBODY, NET SALES from such sales and/or use for purposes of calculating the amounts due under Section 5.2 above shall be calculated by multiplying the NET SALES of that combination by the faction A/(A+B), where A is the gross selling price of the LICENSED PRODUCT or LICENSED SERVICE sold separately and B is the gross selling price of the other product or service sold separately. In the event that no such separate sales or use are made by LICENSEE, NET SALES for purposes of royalty determination shall be as reasonably allocated by LICENSEE between such LICENSED PRODUCT or LICENSED SERVICE and such other product or service, based upon their relative importance and proprietary protection. It is understood and agreed that LICENSEE intends to use LICENSED PRODUCTS and LICENSED SERVICES in connection with products and services provided by LICENSEE which do not entail the use of the LICENSED MONOCLONAL ANTIBODY, and that such products and services shall be subject to this Section 5.3.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

5.4 One Royalty. No more than one royalty payment shall be due with respect to a sale of a particular LICENSED PRODUCT. No royalty shall be payable under this Article 5 with respect to LICENSED PRODUCTS, distributed at no charge, for use in research and/or development, in clinical, in clinical trials or as promotional samples. When a LICENSED PRODUCT is used, sold or sublicensed as part of LICENSED SERVICES, the royalty rate and other changes applicable to LICENSED SERVICES shall apply and no royalty or charge shall be made for the LICENSED PRODUCT in that case.

ARTICLE 6 - REPORTING AND ROYALTY PAYMENT TERMS

6.1 First Sales. LICENSEE shall report to FHCRC the date of first sale of LICENSED PRODUCTS and or LICENSED SERVICES in each country within thirty (30) days of occurrence.

6.2 Sales Reports and Royalty Payments. Commencing upon the First Commercial Sale, LICENSEE shall submit to FHCRC within sixty (60) days after June 30 and December 31 of each year during the Term, and upon the effective termination Of this Agreement, reports for the preceding six (6) month period identifying the amount of the LICENSED PRODUCTS or LICENSED SERVICES sold by LICENSEE, its AFFILIATES and sublicensees in each country, the sales volume and NET SALES, and the amount of royalty due to FHCRC together with payment of such royalty amount. Such report shall be certified as correct by an officer of LICENSEE and shall include a detailed listing of all deductions from NET SALES, sublicensee income or from royalties as specified herein. If no royalties are due to FHCRC for any reporting period, the written report shall so state. All payments due hereunder shall be paid in United States Dollars. If any currency conversion shall be required in connection with the payment of any royalties hereunder, such conversion shall be made by using the exchange rate for the purchase of United States Dollars reported by the Bank of America on the last business day of the calendar quarter to which such royalty payments relate. If at any time legal restrictions prevent the prompt remittance of any royalties owed on NET SALES in any jurisdiction, LICENSEE shall notify FHCRC and make such payments by depositing the amount thereof in local currency in a bank account or other depository in such country in the name of FHCRC. All payments shall be without deduction of exchange, collection or other charges. Without regard to or waiver of any other remedies that may be available under this Agreement, any royalty payments not made when due shall bear interest at the rate of **[*]** per annum, compounded daily.

6.3 Withholding Taxes on Royalties. To the extent that any earned royalties due FHCRC under this Agreement are subject to taxation where the taxes are imposed on FHCRC, FHCRC agrees to bear such taxes. FHCRC hereby authorizes LICENSEE or sublicensee to withhold such taxes from the payment which are otherwise payable to FHCRC in accordance with this Agreement if LICENSEE or sublicensee is either required to do so under the tax laws of the country of sale or in the United States or directed to do so by an agency of either such government. LICENSEE shall furnish FHCRC with relevant documentation showing assessment of the taxes and the best available evidence of payment whenever LICENSEE or sublicensee deducts such tax from any payments due FHCRC.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

6.4 Confidentiality of Reports. All such reports shall be maintained in confidence by FHCRC, except as required by law, including Public Laws 96-517 and 98-620.

ARTICLE 7 - RECORD KEEPING

7.1 Recordkeeping. LICENSEE shall maintain and require each sublicensee to maintain complete and accurate books of account and records showing all sales of LICENSED PRODUCTS and all NET SALES (including the amount of gross sales and allowable deductions attributable to such sales). For purposes of verifying the accuracy of the royalties paid by LICENSEE pursuant to this Agreement or verifying performance of LICENSEE of any other obligation to FHCRC hereunder, such books and records shall be open to inspection and copying, during usual business hours, by an independent certified public accountant. Such accountant shall not disclose to FHCRC any information other than information relating to accuracy of reports and calculations of amounts due to FHCRC made under this Agreement. In the event that any such inspection shows any underreporting and underpayment by LICENSEE in excess of five percent (5%) for any twelve (12) month period, then LICENSEE shall pay the cost of such examination. Such books and records shall be maintained for at least three (3) years following the reporting period to which the books and records relate.

ARTICLE 8 - INDEMNIFICATION AND INSURANCE

8.1 Indemnification. LICENSEE, including any successor to LICENSEE, shall, and shall obligate its AFFILIATES or its sublicensees, if any, to indemnify, defend and hold harmless FHCRC, its AFFILIATES and their respective directors, officers, employees, agents and contractors (each an “Indemnitee”) from and against any and all liabilities, damages, losses, costs or expenses (including reasonable attorneys’ and professionals’ fees and other expenses of litigation and/or arbitration (a “Liability”)) resulting from a claim, suit or proceeding brought against an Indenmitee, arising out of or in connection with or resulting from (i) any misrepresentation with regard to, or breach of, any of the representations and warranties of LICENSEE set forth in Section 12 of this Agreement, (ii) the use, development, manufacture, distribution, sublicensing or sale of the LICENSED PRODUCTS or LICENSED SERVICES by LICENSEE or its AFFILIATES or sublicensees except to the extent caused by the negligence or willful misconduct of FHCRC, including without limitation any Liabilities resulting from infringement of third party intellectual property rights, and (iii) any other activities performed by LICENSEE or its AFFILIATES or sublicensees pursuant to this Agreement.

8.2 FHCRC. FHCRC shall indemnify, defend and hold harmless LICENSEE and its directors, officers and employees (each an “Indemnitee”) from and against any and all liabilities, damages, losses, costs or expenses (including reasonable attorneys’ and professionals’ fees and other expenses of litigation and/or arbitration) resulting from a claim, suit or proceeding brought against an Indemnitee, arising out of or in connection with any misrepresentation with regard to, or breach of, any of the representations and warranties of FHCRC set forth in Section 12, except to the extent caused by the negligence or willful misconduct of LICENSEE.

8.3 Insurance. In the event of any testing or use in human subjects of LICENSED PRODUCTS, LICENSEE will have FHCRC named as an additional insured on LICENSEE’S

product liability insurance policies, with limits of at least **[*]** annual aggregate. Upon the First Commercial Sale, LICENSEE will have FHCRC named as an additional insured on LICENSEE's product liability insurance policies, with limits of **[*]** annual aggregate. Such policies shall not be terminated without thirty (30) days prior written notice to FHCRC. LICENSEE shall provide FHCRC with written evidence of the insurance and a copy of the policy upon request.

8.4 Legal Action. In the event any legal action is commenced against LICENSEE involving the LICENSED MONOCLONAL ANTIBODY, LICENSED CELL LINE, LICENSED PRODUCTS and/or LICENSED SERVICES, whether or not FHCRC is named as a party to the legal action, LICENSEE shall keep FHCRC or its attorney nominee fully advised of the progress of the legal action and shall reimburse FHCRC for its reasonable legal costs (including attorney's fees) incurred as a result of FHCRC's employees or agents being called as witnesses therein or asked to testify for or consult with LICENSEE in connection therewith. FHCRC agrees to cooperate with LICENSEE, to the extent reasonably possible, in any legal action brought pursuant to this Article 8.

ARTICLE 9 - DISPUTE RESOLUTION

9.1 The parties do not favor litigation. Therefore, unless a party is entitled to injunctive relief, as ultimately determined by a court of competent jurisdiction, because (i) the party is exposed to irreversible losses unless the conduct is enjoined, (ii) there is no adequate remedy in the form of compensatory damages, and (iii) there is a substantial likelihood that the party will prevail on the merits, the parties agree to submit all disputes relating to the interpretation, enforcement, or breach of this Agreement to non-binding mediation before a mediator acceptable to both parties in accordance with its Commercial Mediation Rules or such alternative mediator as the parties may approve in writing.

9.2 If the parties are unable to resolve their differences through mediation as provided in this Article 14 or if the matter is not subject to mediation under this Article 14, either party may initiate a lawsuit to resolve the dispute.

ARTICLE 10 - CONFIDENTIALITY

10.1 Definition of Confidential Information. It is contemplated that in the course of the performance of this Agreement each party may, from time to time, disclose proprietary and confidential information to the other ("Confidential Information"). Confidential Information shall include all disclosures made hereunder or under previous confidentiality agreements between the Parties in writing and identified as being "Confidential," or if disclosed orally, which are reduced to writing within thirty (30) days of oral disclosure and clearly identified as being "Confidential." FHCRC and LICENSEE agree that this Agreement shall supersede all previous confidentiality agreements between the parties and all disclosures made under any previous confidentiality agreements shall be subject to the terms of this Section 10.

10.2 Nondisclosure of Confidential Information. Except to the extent expressly authorized by this Agreement or otherwise agreed to in writing, during the term of this Agreement and for a period of five (5) years following the termination of this Agreement, each party shall take such

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

reasonable measures to protect the secrecy of and avoid disclosure or use of such Confidential Information of the other party in order to prevent it from falling into the public domain or the possession of any person other than those persons authorized under this Agreement to have any such information. Such measures shall include, but not be limited to, the highest degree of care the receiving party takes to protect its own proprietary and confidential information of a similar nature, which shall be no less than reasonable care. Neither party shall disclose or permit disclosure of any Confidential Information of the other party to third parties or to employees of the party receiving Confidential Information, other than directors, officers, employees, consultants and agents who are required to have the information in order to carry out the terms of this Agreement. Each party shall notify the other in writing of any actual or suspected misuse, misappropriation or unauthorized disclosure of the other party's Confidential Information that may come to such party's attention. Not withstanding the foregoing, Confidential Information from FHCRC shall include but not be limited to devices, cell lines, monoclonal antibodies, methods, processes, data regarding testing and experiments, drawings, documentation, patent applications and product development plans, is FHCRC's confidential, proprietary, trade secret information.

10.3 Exceptions. The following information shall not be considered Confidential Information:

(a) information which was already known to the receiving party, other than under an obligation of confidentiality to the disclosing party, at the time of disclosure by the other party as shown by the receiving parties written records;

(b) information which was generally available to the public or otherwise part of the public domain at the time of its disclosure to the receiving party;

(c) information which becomes generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the receiving party in breach of this Agreement;

(d) information which was disclosed to the receiving party, other than under an obligation of confidentiality, by a third party who had no obligation to the disclosing party not to disclose such information; or

(e) information which was developed independently without reference to Confidential Information received from the other party hereunder as evidenced by the receiving party's own written records.

10.4 Permitted Usage. Notwithstanding the provisions of Section 10.1 above, the receiving party may use or disclose Confidential Information of the disclosing party in connection with the exercise of its rights hereunder (including commercialization and/or sublicensing) or the fulfillment of its obligations and/or duties hereunder and in filing for, prosecuting or maintaining any proprietary rights, prosecuting or defending litigation, complying with applicable governmental regulations and/or submitting information to tax or other governmental authorities; provided that if the receiving party is required by law to make any public disclosures of Confidential Information of the disclosing party, to the extent it may legally do so, it shall give

reasonable advance notice to the disclosing party of such disclosure and shall use its reasonable efforts to secure confidential treatment of Confidential Information prior to its disclosure (whether through protective orders or otherwise) ; and, provided, further, that to the extent that the receiving party is disclosing information to a third party for commercialization or sublicensing that the third party has agreed to terms at least as restrictive as the terms of this Article 10 and may not further disclose the information to any third party and FHCRC has been provided with a copy of the agreement.

ARTICLE 11 - TERMINATION OF AGREEMENT

11.1 Termination on Payment Default. At FHCRC's option, FHCRC may terminate this Agreement effective thirty (30) days after giving written notice in the event LICENSEE fails to pay any royalties or other amounts owed under this Agreement when due. During the thirty (30) day period after written notice of payment default, LICENSEE has the right to cure any payment default and prevent termination under this Section 11.1.

11.2 Termination on Other Defaults. This Agreement may be terminated by either party upon a material breach by the other party other than a payment default which is governed by Section 11.1, effective ninety (90) days after giving written notice to the breaching party of such termination under this Section and specifying such breach, unless the breach is cured or shown to be non-existent within the ninety (90) day period, in which case the Agreement will remain in effect.

11.3 Termination on Bankruptcy or Insolvency. Subject to any provisions of the federal bankruptcy laws limiting rights of termination, FHCRC may terminate this Agreement if LICENSEE files for protection under federal bankruptcy laws, becomes insolvent, makes an assignment for the benefit of creditors, appoints or suffers appointment of a receiver or trustee over its property, files a petition under any bankruptcy or insolvency act or has any such petition filed against it or files for dissolution.

11.4 Termination by LICENSEE. LICENSEE may terminate this Agreement in its entirety for any reason or no reason with thirty (30) days written notice to FHCRC.

11.5 Effect of Termination. Upon termination of this Agreement, each party will turn over to the other party all Confidential Information of such other party and all documents or data storage media containing any such Confidential Information and any and all copies thereof and will delete all such Confidential Information from its documents or data storage media. In addition, upon termination of this Agreement, LICENSEE shall return to FHCRC or destroy, at FHCRC's option and expense all of the LICENSED CELL LINE and all LICENSED MONOCLONAL ANTIBODY in possession of LICENSEE or any AFFILIATE sublicensee or other third party who has received the LICENSED CELL LINE or LICENSED MONOCLONAL ANTIBODY from LICENSEE provided that LICENSEE shall be entitled to sell LICENSED PRODUCT as provided in Section 11.7 of this Agreement. Upon termination of this Agreement the Licenses shall terminate. Neither party shall be able to claim from the other party any damages or compensation for loses or expenses resulting solely from termination of this Agreement as permitted under this Section 11.

11.6 Effect of Termination on Sublicensees. Any sublicenses granted by LICENSEE under this Agreement shall provide for termination or assignment to FHCRC at FHCRC's sole discretion, of LICENSEE's interests therein upon termination of this Agreement for any reason.

11.7 Sale of Products on Termination. In the event of any early termination of this Agreement in accordance with this Article 11, for a period of six (6) months after termination LICENSEE shall have the right to sell all LICENSED PRODUCTS on hand at the time of such termination, provided that LICENSEE shall make all payments with respect thereto to FHCRC in accordance with this Agreement.

11.8 Final Report. Upon termination, a final report shall promptly be submitted in accordance with the provisions of Section 5.4, together with any royalty payments and unreimbursed patent expenses due to FHCRC.

11.9 Survival of Rights and Duties. Rights and duties hereunder which by their terms or nature survive the termination or expiration of this Agreement shall so survive such termination or expiration, including without limitation LICENSEE's duties under Articles 5 through 11 and 15.

ARTICLE 12 - REPRESENTATIONS AND COVENANTS

12.1 LICENSEE Representations and Warranties. LICENSEE represents and warrants to FHCRC that it has obtained and will at all times during the Term hold and comply with all licenses, permits and authorizations necessary to LICENSEE's complete and timely performance of its obligations under this Agreement which are required under any applicable statutes, laws, ordinances, rules and regulations of the United States as well as those of all applicable foreign governmental bodies, agencies and subdivisions, having, asserting or claiming jurisdiction over LICENSEE or LICENSEE's performance of the terms of this Agreement. In particular, LICENSEE:

(a) will be responsible for obtaining all necessary United States Food and Drug Administration approvals and all approvals required by similar governmental bodies or agencies of all applicable foreign countries; and

(b) understands and acknowledges that the transfer of certain commodities and technical data is subject to United States laws and regulations controlling the export of such commodities and technical data, including all Export Administration Regulations of the United States Department of Commerce. These laws and regulations, among other things, prohibit or require a license for the export of certain types of technical data to certain specified countries. LICENSEE hereby agrees and gives written assurance that it will comply with all United States laws and regulations controlling the export of commodities and technical data, that it will be solely responsible for any violation of such by LICENSEE or its AFFILIATES or sublicensees, and that it will defend and hold FHCRC harmless in the event of any legal action of any nature occasioned by such violation.

12.2 FHCRC Representations and Covenants. FHCRC warrants and represents to LICENSEE that: (i) it has and will maintain the full right and authority to enter into this Agreement and grant the rights and licenses granted herein; (ii) it has not previously granted and will not grant any rights or licenses in conflict with the rights and licenses granted herein; (iii) to its knowledge no action, suit or claim has been initiated or threatened with respect to the LICENSED MATERIALS that would call into question FHCRC's right to enter into and perform its obligations under this Agreement;

12.3 Disclaimer of Warranty. To Licensee, its AFFILIATES, its sublicensees and customers or otherwise, express or implied, oral or written, arising by law, course of dealing, course of performance usage of trade or otherwise, with respect to the LICENSED CELL LINE, LICENSED MONOCLONAL ANTIBODY, LICENSED PRODUCT, LICENSED TECHNICAL INFORMATION, including without limitation all warranties as to the condition, manufacture, sale, use, operation, design, quality, capacity, latent defects, compliance with any law, ordinance, regulation, rule, contract or specification, "merchantability," fitness for any particular purpose, and all other qualities and characteristics whatsoever. FHCRC neither assumes nor authorizes LICENSEE or any person to assume for FHCRC any liability in connection with the manufacture, sale or use of any LICENSED PRODUCT. In no event shall FHCRC be liable for any consequential, incidental or special damages or expenses (including without limitation labor, transportation, loss of use, loss of profits and damage to persons or property) even if FHCRC has been advised of the possibility thereof.

ARTICLE 13 - COMMERCIALLY REASONABLE EFFORTS

13.1 Reasonable Efforts. LICENSEE shall use reasonable effort to introduce the LICENSED PRODUCTS into the commercial market within five (5) years of the Effective Date, consistent with sound and reasonable business practices and judgment, and thereafter endeavor to keep LICENSED PRODUCTS reasonably available to the public.

ARTICLE 14 - NOTICES

14.1 Notices. All communications, including payments, notices, demands or requests required or permitted to be given hereunder, shall be given in writing and shall be:

(a) personally delivered;

(b) sent by facsimile or other electronic means of transmitting written documents; or

(c) sent to the parties at their respective addresses indicated herein by registered or certified U.S. mail, return receipt requested and postage prepaid, or by private overnight mail courier service. The respective addresses to be used for all such payments, notices, demands or requests are as follows:

If to FHCRC: Fred Hutchinson Cancer Research Center
1100 Fairview Ave. N., C2M-027
Seattle, Washington 98109
Attention: Rosalie Beer,

Senior Licensing Associate
Facsimile: (206) 667-4732

With copies to: Douglas J. Shaeffer, Esq.
Fred Hutchinson Cancer Research Center
1100 Fairview Ave. N., C2M-027
Seattle, Washington 98109
Facsimile: (206) 667-6590

If to LICENSEE: Xcyte Therapies, Inc.
2203 Airport Way South, Suite 300
Seattle, WA 98134
Attention: Business Development
Facsimile: (206) 328-7316

With copies to: Venture Law Group
4750 Carillon Point
Kirkland, Washington 98033-7355
Attn: William W. Ericson
Facsimile: (425) 739-8750

If personally delivered, such communication shall be deemed delivered upon actual receipt. If electronically transmitted pursuant to this section, such communication shall be deemed delivered when transmitted. If sent by overnight courier pursuant to this section, such communication shall be deemed delivered within twenty-four hours of deposit with such courier. If sent by U.S. mail pursuant to this section, such communications shall be deemed delivered as of the date of delivery indicated on the receipt issued by the relevant postal service, or, if the addressee fails or refuses to accept delivery, as of the date of such failure or refusal. Any party to this Agreement may change their address for the purposes of this Agreement by giving notice in accordance with this Section.

ARTICLE 15 - MISCELLANEOUS

15.1 Governing Law. The rights and obligations of the parties under this Agreement shall be governed by and construed in accordance with the laws of the State of Washington.

15.2 Amendments. This Agreement may not be amended except by an instrument in writing signed by both parties.

15.3 Assignability. The Agreement shall be binding on the parties hereto and upon their respective heirs, administrators, successors and assigns. This Agreement may not be assigned by LICENSEE or by operation of law without the prior written consent of FHCRC, which consent shall not be unreasonably withheld; except either party may assign this Agreement, without such consent, to (i) an AFFILIATE of such party; or (ii) an entity that acquires all or substantially all of the business or assets of such party to which this Agreement pertains, whether by merger,

reorganization, acquisition, sale or otherwise, and that agrees in writing to be strictly bound by the terms and conditions of this Agreement.

15.4 Non-Profit Status. LICENSEE acknowledges that FHCRC is a non-profit organization qualifying for and holding the status of an exempt organization under Section 50l(c)(3) of the United States Internal Revenue Code. If the Internal Revenue Service determines, or a determination by FHCRC based on advice of legal or tax counsel is reasonably made, that any part or all of this Agreement will jeopardize FHCRC's Section 501(c)(3) status, the parties agree to meet and confer in good faith to amend this Agreement to the extent necessary to satisfy Internal Revenue Service requirements for retention of FHCRC's Section 50l(c)(3) status. If FHCRC and LICENSEE cannot agree within 30 days after commencing negotiations regarding the amendments to be made to this Agreement in order for FHCRC to retain its Section 501(c)(3) status, FHCRC may terminate this Agreement effective upon giving written notice to LICENSEE of termination under this Section 10.

15.5 Conflicts with Grants. LICENSEE understands and acknowledges that agreements between FHCRC and agencies of the United States Government funding FHCRC's programs may contain clauses granting patent and/or other rights to the agencies or the U.S. Government; LICENSEE agrees that the rights granted to it under this Agreement shall be subject to any rights of the agencies and the U.S. Government. If a conflict arises, the provisions of any U.S. Government agency funding agreement and/or regulation shall prevail over any conflicting provisions of this Agreement and FHCRC will have no liability to LICENSEE as a result of such conflict. If such a conflict arises or is reasonably anticipated, FHCRC will promptly give notice to LICENSEE of the nature of the conflict and copies of any correspondence relating thereto in accordance with Section 14.1.

15.6 Use of Name. Neither party shall use the name of the other party or reveal the terms of this Agreement in any publicity or advertising without the prior written approval of the other party, except that (i) either party may use the text of a written statement approved in advance by both parties without further approval; (ii) either party shall have the right to identify the other party and to disclose the terms of this Agreement as required by applicable securities laws or other applicable law or regulation; and (iii) either party may disclose that a licensing relationship exists between the parties and may disclose the name of the other party in that context.

15.7 Written Notices. All letters, documents, or other materials of a written or physical nature, required by or relating to this Agreement shall be in English and sent to the party at the address given in Article 14.

15.8 Independent Parties. The parties to this Agreement are independent contractors and not agent of the other. This Agreement shall not constitute a partnership or joint venture, and neither party may be bound by the other to any contract, arrangement or understanding except as specifically stated herein.

15.9 Enforceability. Should a court of competent jurisdiction later consider any provision of this Agreement to be invalid, illegal, or unenforceable, it shall be considered severed from this Agreement. All other provisions, rights and obligations shall continue without regard to the

severed provision, provided that the remaining provisions of this Agreement are in accord with the intention of the parties.

15.10 Actions. In the event any party to this Agreement commences any action or proceeding, including an appeal of an action or proceeding, against the other, or otherwise retains an attorney, by reason of any breach or claimed breach of any provision of this Agreement, or to seek a judicial declaration of rights hereunder or judicial or equitable relief, the prevailing party in such action or proceeding shall be entitled to recover its reasonable attorneys' fees and costs. At the option of FHCRC, venue of any such legal or equitable action shall lie in Seattle, Washington. LICENSEE hereby submits to the jurisdiction of the Federal District Court of Western Washington located in Seattle, Washington, and hereby agrees to accept service of process by certified mail, return receipt requested, effective upon delivery to LICENSEE.

15.11 Force Majeure. LICENSEE and FHCRC shall not be liable for loss, damage, detention or delay resulting from any cause whatsoever beyond its reasonable control or resulting from a force maj cure, including, without limitation, fire, flood, strike, lockout, civil or military authority, insurrection, war, embargo, container or transportation shortage or delay of suppliers due to such causes, and delivery dates shall be extended to the extent of any delays resulting from the foregoing or similar causes. The party so affected shall give prompt notice to the other party of such cause, and shall take whatever reasonable steps are necessary to relieve the effect of such cause as rapidly as reasonably possible. The party giving such notice shall thereupon be excused from such of its obligations hereunder as it is thereby disabled from performing for so long as it is so disabled and for thirty (30) days thereafter, whichever is longer; provided, however, that such affected party commences and continues to take reasonable and diligent actions to cure such cause.

IN WITNESS WHEREOF, the parties have executed this Agreement through duly authorized representatives as of the date first above written.

FRED HUTCHINSON CANCER RESEARCH CENTER

By /s/ Douglas J. Shaeffer

Printed
Name Souglas J Shaeffer
Title, V.P. and General Counsel

XCYTE THERAPIES INC.

By /s/ Ronald Jay Berenson

Printed
Name Ronald Jay Berenson

Title President & CEO

Exhibit 10.38

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [*****]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

AGREEMENT

For Services Relating to the Cell Line Known as [*]

Expressing Product XR-[*]

Between

LONZA BIOLOGICS PLC

And

XCYTE THERAPIES, INC.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

AGREEMENT

For Services Relating to the Cell Line known as [*]

Expressing Product XR-[*]

between

LONZA BIOLOGICS PLC

and

XCYTE THERAPIES, INC.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

THIS AGREEMENT is made the 6 day of June, 2000

BETWEEN

1. LONZA BIOLOGICS PLC, the registered office of which is at 228 Bath Road, Slough, Berkshire SL1 4DY, England ("LB"), and
2. XCYTE THERAPIES, INC., of 1124 Columbia Street, Suite 130, Seattle, Washington 98104, USA, ("Customer").

WHEREAS

A. Customer is the proprietor of, or licensed to use, the Cell Line [*] (designated at LB as **[*]**) expressing Product XR-[*], and

B. LB has the expertise in the development of process for and manufacture of similar products, and

C. Customer wishes to contract with LB for services to develop a Process for and manufacture Product, and

D. LB is prepared to perform such Services for Customer on the terms and conditions set out herein, and

E. LB will where scientifically possible perform such Services in parallel with Services to produce Product XR-[*] for Customer.

NOW THEREFORE it is agreed as follows:

1. In this Agreement, its recitals and the schedules hereto, the words and phrases defined in Schedule 4 hereto and in the Standard Terms for Contract Services set out in Schedule 5 hereto shall have the meanings set out therein.
2. Subject to the Standard Terms for Contract Services set out in Schedule 5 and any Special Terms, LB agrees to perform the Services and the Customer agrees to pay the Price together with any additional costs and expenses that fall due hereunder.
3. 3.1 Any notice or other communication to be given under this Agreement shall be delivered personally or sent by facsimile transmission, or if facsimile transmission is not available, by first class pre-paid post addressed as follows:

   3.1.1 if to LB to:

   Lonza Biologics plc
   228 Bath Road

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Slough
Berkshire SL1 4DY

Facsimile: 01753 777001
For the attention of the Head of Legal Services

3.1.2 if to the Customer to:

Xcyte Therapies, Inc.
1124 Columbia Street
Suite 130
Seattle
Washington 98104

Facsimile: 206 262 0900
For the attention of Director, Business Development

or to such other destination as either party hereto may hereafter notify to the other in accordance with the provisions of this clause.

3.2 All such notices or other communications shall be deemed to have been served as follows:

3.2.1 if delivered personally, at the time of such delivery;

3.2.2 if sent by facsimile, upon receipt of the transmission confirmation slip showing completion of the transmission;

3.2.3 if sent by first class pre-paid post, ten (10) business days (Saturdays, Sundays and Bank or other public holidays excluded) after being placed in the post.

AS WITNESS the hands of the duly authorised representatives of the parties hereto the day and year first above written.

Signed for and on behalf of	/s/ Edwin Davies	
LONZA BIOLOGICS PLC	President	Title
Signed for and on behalf of	/s/ Ronald Jay Berenson	
XCYTE THERAPIES, INC.	President & CEO	Title

SCHEDULE 1

For the purposes of this document Cell Line shall mean the **[*]** cell line **[*]** (designated at LB as **[*]**), expressing the **[*]** XR-**[*]**.

Product shall mean the anti-**[*]** antibody, XR-**[*]**.

A. DRAFT SPECIFICATION FOR BULK PURIFIED PRODUCT

Note: After completion of **[*]** of the Services, Lonza and the Customer agree to review performance against the draft Specification and to agree the timeframe for moving to a full Specification.

	TEST	**METHOD**	**SPECIFICATION**
		(LB SOPs)	
1.1	Appearance	60516C	[*]
1.2	Particulates	60516C	Report result. For information only.
1.3	pH at [*]	60328C	As determined by LB under the Services.
1.4	Protein concentration [*] [*]	60284C	To be set by the Customer as between [*]
1.5	Purity Reduced [*] Non-reduced [*]	60359C	Greater than or equal to [*]. Report result
1.6	[*]	60334C	[*] greater than or equal to [*]. Less than or equal to [*].
1.7	[*]	60512C	Report result. Compare to reference.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Note: **[*].**

1.8	Isotype	tbd	[*]
1.9	Extended [*]	60288C (21 CFR 610.12) (EP & USP)	[*] detected after [*] days
1.10	Mycoplasmas (production fermenter at harvest)	(FDA points to consider 1993)	[*].
1.11	Endotoxins (LAL colorimetric)	60186C	Less than or equal to [*].
1.12	[*] DNA (Hybridisation)	60461C	Less than or equal to [*].
1.13	[*]	60433C	Less than or equal to [*].
1.14	Bovine serum albumin (if appropriate)	60445C	Less than or equal to [*].
1.15	Tropolone	Development assay	For information only.
1.16	Recombinant human insulin	60448C	Less than or equal to [*].
1.17	Host cell protein	Development assay	For information only.
1.18	Virus testing (production fermenter). Testing will be carried out by a Testing Laboratory. Samples taken from the production fermenter [*]:		
	[*]		Report result*
	[*]		Report result*
	[*]		Negative
	[*]		

***Note:** *If fermenter result is [*], the final Product will be tested for [*] as appropriate. Product will only meet the draft Specification if these tests are [*]. In the event that the fermenter sample is [*], an [*] test will be performed on the [*] for quantification.*

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

	Number of virus-like particles per ml of bulk harvest (EM)		Report result
2.	Final Formulation Buffer	:	To be determined by LB under the Services
3.	Bottling of Bulk Product:		
	3.1 Containers	:	[*] bottles.
	3.2 Denominations	:	[*] (Customer samples). Bulk to be agreed.

Note: *The Customer may request that LB bottles Product in [*] that are not standard to LB's GMP operation. If so the validation studies under Stage 9 may be required to be performed under the services [*].*

4.	Product Storage Conditions	:	Store at greater than or equal to [*], less than or equal to [*].
5.	Shipment Temperature	:	Product shipped at greater than 0ºC, less than or equal to [*].
6.	Labelling	:	Plain, white, matt, permanent, thermal transfer labels [*]. Label information to contain Product name, Cell Line name, Lot number, Date of Manufacture, [*] and Storage Information.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

B. SPECIFICATION FOR A MASTER OR WORKING CELL BANK

Starting Material Definition

Master or Working Cell Bank of a cryopreserved **[*]** cell line prepared from a pooled culture and stored in individual ampoules in liquid nitrogen refrigerators.

1. The acceptance criteria for tests performed on ampoules from the cell bank

TEST	METHOD	SAMPLE SIZE	SPECIFICATION
Viability & Homogeneity	LB (51200C)	[*]	Viable
Mycoplasma	DNA stain; FDA Points to Consider 1993	[*]	[*]
Mycoplasma	Direct Isolation; 21 CFR 610.30 and FDA Points to Consider 1993		[*]
Sterility	21 CFR 610.12 & USP, EP (LB 60159C) detected after 14 days	[*]	[*]

2. The acceptance criteria for tests performed on ampoules of the Cell Bank or on ampoules of cell stocks linearly related to the Cell Bank, tests to be performed on cell lines before entry into LB's GMP facility, using accredited LB Testing Laboratories.

TEST	SPECIFICATION
Species Identity (Isoenzyme analysis)	Typical for a [*] cell line.
[*]	[*]
[*] Antibody Production	[*]

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE 2

SERVICES

CONTENTS

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1. Supply of Customer Materials and Customer Know-How

2. Activities to be undertaken by LB:

Stage 1—Cell Line Evaluation

Stage 2—Master and Working Cell Bank Preparation and Analysis

Stage 3—Purification Process Development

Stage 4—cGMP Documentation

Stage 5—Development Pilot Batch at **[*]**

Stage 6—Production of cGMP Material at **[*]**

Stage 7—Manufacturing and Control Data Packages

Stage 8—Evaluation of Retrovirus Clearance

Stage 9—Validation of Bulk Product bottling and shipping in **[*]** volumes

Stage 10—Preformulation Study

Stage 11—Bulk Product Stability Studies

Stage 12—Reference Standard Characterisation and Product Equivalence Studies

Stage 13—Evaluation of LB's **[*]** with Product

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1. SUPPLY OF CUSTOMER MATERIALS AND CUSTOMER KNOW HOW

Customer shall supply to LB the following:

i) Information on the Cell Line and the Product to allow a safety assessment by LB's Biological Safety Committee. This information has to be reviewed before the Cell Lines can be sent to LB.

ii) At least **[*]** of viable frozen cells of the Cell Line, containing approximately **[*]**. The Cell Line is understood to be fully cloned and suitable for the development programme outlined in the Services. The Customer may supply the Cell Line in the form of a cell stock or a Customer cell bank.

iii) A purified reference standard for each of the Products (approximately 10mg samples if possible).

2. ACTIVITIES TO BE UNDERTAKEN BY LB

1.0 Stage 1—Cell Line Evaluation

1.1 Objectives

1.1.1 To adapt the Cell Line to suspension culture in LB's **[*]** for **[*]** cell lines and to choose a final production medium.

1.1.2 To monitor stability of production.

1.1.3 To determine fermentation production kinetics and establish a fermentation Process for production of Product using the chosen production medium.

1.2 Activities

1.2.1 Send ampoules of the incoming Cell Line to a Testing Laboratory to be tested by assay for **[*]**.

1.2.2 Using the Product reference standard provided by the Customer evaluate LB's **[*]**.

1.2.3 After receiving confirmation that the incoming Cell Line is **[*]**, adapt the Cell Line to growth in suspension in LB's **[*]**. Screen by allowing **[*]** and measure **[*]**.

Deliver samples of culture supernatant and appropriate medium control from the **[*]** to the Customer to enable the Customer to confirm **[*]** by an **[*]** assay.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.2.4 Purify a small quantity of antibody from the supernatants of the adapted Cell Line by **[*]**. Compare to the appropriate reference standard.

Deliver samples (generally less than **[*]**) of purified Product to the Customer. The Customer would like to receive **[*]** samples if possible at this point. If this quantity can not be achieved LB may agree to provide additional material to the Customer.

1.2.5 **[*]** of the Cell Line.

1.2.6 Prepare an interim report for the Customer.

Evaluation Point: At this point LB will provide the Customer with a brief interim report and the Customer and LB will make a preliminary evaluation of Cell Line **[*]** and the Customer will assess the **[*]** of Product produced by the Cell Line. The Customer and LB will agree at this point whether to conduct the remainder of the Services in **[*]** medium.

1.2.7 Assess stability of production of the Cell Line in **[*]** culture for at least **[*]**. Confirm Product **[*]** by **[*]** and **[*]**. Deliver supernatant samples to the Customer to enable the Customer to confirm **[*]** activity of the Product.

Evaluation Point: At this point the Customer and LB may assess the suitability of the Cell Line for large scale production.

1.2.8 Evaluate growth of the Cell Line to determine if LB's **[*]** regime is appropriate.

1.2.9 Carry out a **[*]** in two laboratory scale **[*]**, using a **[*]**, to determine the **[*]**.

1.2.10 Conduct preliminary studies on **[*]**.

1.2.11 Determine Product concentration during the laboratory scale **[*]** by **[*]** and **[*]**.

1.2.12 Issue report of activities to the Customer. This report shall include the following:

— Details of key experimental data generated in Stage 1.

— An assessment of the performance of the Cell Line at laboratory scale.

— A preliminary estimate of the expected yield from the selected Cell Line at production scale.

Note: *In all reports to the Customer any techniques or reagents used which are proprietary to LB will be described in outline only.*

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.3 Timescale

Stage 1 shall be complete with the issue of the report of activities and it is estimated that this report will be issued within **[*]** from the start of Stage 1.

Stage 2 (Cell Banking) can commence at the Customer's request any time after activity 1.2.5 is complete i.e. the PSS is available. It is estimated that activity 1.2.5 will be complete **[*]** after commencement of Stage 1.

2.0 Stage 2—Master and Working Cell Bank Preparation and Analysis

2.1 Objectives

2.1.1 Create and characterise a master and working cell bank (MCB and WCB).

2.1.2 To test the PSS (Stage 1, 1.2.5) of the Cell Line such that sufficient test information is available for rapid transfer of the Cell Line to LB's GMP manufacturing facility. Testing for potential adventitious agents is required so that all cell lines and products are protected for customers.

2.2 Activities

2.2.1 Send an **[*]** (Stage 1, 1.2.5) of the Cell Line for **[*]** to a Testing Laboratory **[*]**.

2.2.2 Send **[*]** of the Cell Line to Testing Laboratories to be tested by:

a) Assay for viruses:
[*]

[*]

b) Isoenzyme analysis

2.2.3 Prepare documentation, as approved by LB's Quality Services Department for the preparation of the cell banks from the PSS.

2.2.4 Establish a **[*]** MCB and a **[*]** WCB according to GMP. The MCB will be derived from **[*]** of the PSS and the WCB will be derived from **[*]** of the MCB. The cell banking system is designed in line with the "Points to Consider in the Characterisation of Cell Lines used to Produce Biologicals" (1993—Food and Drug Administration), and the "Production and Quality Control of Monoclonal Antibodies" (Adopted July 1995: Commission of the European Communities).

2.2.5 Establish standard maintenance, storage and release procedures for the MCB and WCB on and off the LB production site.

2.2.6 Characterise the MCB and WCB :-

[*].

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Assess cell bank viability from **[*]** distributed through the bank. Evaluate **[*]** from the MCB and WCB following LB's **[*]** and measure **[*]**.

2.2.7 Issue report of activities to Customer. The report shall include:

a description of the preparation of the cell banks;
details of the history of the Cell Line at LB;
mycoplasma and sterility test results on the cell banks;
details of cell growth characteristics for the Cell Line;
details of materials and methods used for activities under Stage 2;
a summary of LB's storage and control procedures for the cell banks;
Testing Laboratory reports.

2.3 Cell Bank Characterisation (Viruses)

Additional cell bank characterisation will be required in order to support regulatory applications to conduct clinical trials, or market a product. LB can arrange for such testing at LB's approved contractors on the Customer's behalf or alternatively deliver ampoules of the Cell Line to the Customer for performance of this testing.

Such testing should take place on the MCB, WCB, and the end of production cell bank EPC (see 6.2.3). LB if requested by the Customer, can review with the Customer strategies for cell bank testing.

Note: *This proposal makes provision for testing of the PSS to enable rapid transfer of the Cell Line into LB's manufacturing facility. These tests on the PSS enable the cell banks to meet the cell bank specification (Schedule 1). However, for initiation of clinical trials the cell banks also need to be tested.*

2.4 Timescale

Stage 2 shall be complete with the issue of the report of activities and it is estimated that this report will be issued **[*]** from the start of Stage 2. It is estimated that the **[*]** MCB will be established **[*]** from the start of Stage 2 and the **[*]** WCB will be established **[*]** from the start of Stage 2. Stage 2 will commence once Stage 1, activity 1.2.7 is completed.

3.0 Stage 3—Purification Process Development

3.1 Objectives

3.1.1 To establish a **[*]** suitable for manufacture of Product at **[*]**.

3.1.2 To provide a sample of Product purified using the selected Process to the Customer for evaluation.

3.2 Activities

3.2.1 Receive **[*]** from the Cell Line produced under Stage 1 of the Services (either **[*]**).

3.2.2 Measure Product **[*]** and quantify by **[*]** of a sample purified by **[*]**.

3.2.3 Determine the **[*]** for the Product.

3.2.4 Evaluate **[*]** and **[*]**. Measure **[*]**.

The Product will be treated at **[*]** following **[*]**. This step is designed to **[*]**.

3.2.5 **[*]** for the next step.

At least **[*]** will be included. This will be **[*]**. It may be necessary to follow this by either **[*]**. The final selection of **[*]** will depend on the characteristics of the Product.

For each **[*]** the composition of the **[*]**, **[*]** will be evaluated. **[*]** after each step.

3.2.6 Evaluate a **[*]** to be inserted into the **[*]** at an appropriate point.

3.2.7 **[*]** Product into final **[*]**.

3.2.8 Analyse Product **[*]**. Measure levels of **[*]** (if appropriate), **[*]** and **[*]** Product.

3.2.9 Deliver a **[*]** of Product produced at **[*]** to Customer for evaluation.

3.2.10 Issue report of activities to Customer. This report shall include:

- **[*]**
- **[*]** operation
- copies of **[*]** analysis results
- details of materials and methods used for activities pursuant to Stage 3
- an outline of the recommended manufacturing Process including an estimate of the expected yield of Product at the chosen production scale

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

- a preliminary estimate of the **[*]** that might be achieved across the Process

3.3 Timescale

Stage 3 can commence once **[*]** is available from Stage 1 of the Services. Stage 3 shall be complete with the issue of the report of activities and it is estimated that this report will be issued **[*]** from the start of Stage 3.

4.0 Stage 4—cGMP Documentation

4.1 Objective

To prepare cGMP documentation for use in manufacture of Product for clinical trials.

4.2 Activities

4.2.1 Prepare documentation approved by LB's quality services department. The documentation shall cover:

— Manufacturing Directions for **[*]** Processes including in-Process controls.

— Raw material specifications (as required).

— Sampling protocols.

— Final Product specification.

4.3 Timescale

Stage 4 shall be complete on notification by LB to the Customer that the documentation has been approved by LB's quality services department. It is estimated that Stage 4 will take **[*]** from commencement, Stage 4 will be scheduled in to the overall programme in such a way that it is not rate limiting.

5.0 Stage 5—Development Pilot Batch

5.1 Objectives

5.1.1 To carry out a **[*]** at **[*]** (not to GMP).

5.1.2 To evaluate the ability of the Process to produce Product meeting the purity limits included in the draft Specification.

5.1.3 To produce bulk purified non GMP Product that the Customer could use for **[*]**. Depending on the testing results on the Product the Customer may consider the Product suitable for **[*]**.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

5.2 Activities

5.2.1 Recover **[*]** from the MCB or WCB (Stage 2) and **[*]**. Carry out **[*]**.

5.2.2 **[*]** and **[*]**. Refine the key operational parameters of this **[*]** in the Process.

5.2.3 **[*]** by procedure established during Stage 3.

5.2.4 Test Product **[*]**. The **[*]** will also be carried out on this **[*]**.

5.2.5 Review requirements (if any) for Process modifications that may be needed following this study before Stage 6. Any such Process modifications are subject to agreement.

5.2.6 Lay down a **[*]**, plus container type, to be agreed between LB and the Customer.

5.2.7 Deliver **[*]** Product to the Customer.

5.3 Timescale

Stage 5 shall be complete upon delivery of Product from the pilot batch. It is estimated that Product will be delivered **[*]** from commencement of Stage 5.

6.0 Stage 6—Production of cGMP Material

Note: *This first batch of cGMP material to be made at LB will* **[*]** *batch*

6.1 Objectives

6.1.1 To manufacture Product at **[*]** in accordance with the principles of Good Manufacturing Practice (cGMP).

6.1.2 To further evaluate the ability of the Process to produce Product meeting the draft Specification.

6.2 Activities

6.2.1 After receiving adequate **[*]** on the PSS and sterility, **[*]** on the MCB and WCB (Stage 2), **[*]** from the WCB and **[*]**.

6.2.2 Carry out **[*]** scale.

6.2.3 Remove **[*]** and **[*]** an end of production cell bank (EPC).

6.2.4 **[*]** and **[*]** as specified in Stage 5.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

6.2.5 **[*]** by procedure established during Stage 3.

6.2.6 Test Product against the draft Specification.

6.2.7 Review requirements (if any) for Process modifications in order to meet the Specification for manufacture of subsequent lots.

6.2.8 Deliver Product to the Customer.

6.2.9 Undertake quality assurance review of lot documentation.

6.3 Timescale

Stage 6 shall be complete upon completion of quality assurance review (6.2.9), it is estimated that this will be **[*]** from commencement of Stage 6. Product could be delivered in **[*]** at approximately **[*]** from commencement.

7.0 Stage 7—Manufacturing and Control Data Packages

7.1 Objectives

To prepare data packages covering the Services performed at LB for submission to the appropriate regulatory authorities as required by the Customer.

7.2 Activities

7.2.1 Prepare data packages as required by the Customer, possibly for the purposes of submission as a Type II Drug Master File in the USA and/or for the purposes of submission in a clinical trial application in Europe. Exact **[*]** to be agreed with the Customer as the Services progress.

The data packages will cover:

— Adaptation of the Cell Line

— Preparation of cell banks and cell bank characterisation

— Production and QC methods.

— Lot release procedures. Lot data.

— Virus clearance validation

— Appropriate references to LB validation studies.

7.2.2 Issue data packages to the Customer or to the regulatory authorities as appropriate.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

7.3 Timescale

Stage 7 shall be complete with the issue of the data packages. The time required for completion of Stage 7 depends on the scope of work, to be agreed with the Customer.

8.0 Stage 8—Evaluation of **[*]** Clearance

8.1 Objectives

8.1.1 To obtain data for **[*]** by the **[*]** used in the **[*]** of bulk Product.

8.2 Activities

8.2.1 Design a scaled down Process for each **[*]**. The scaled down Process will mimic as closely as reasonably possible the manufacturing scale Process.

8.2.2 Prepare a GLP study protocol.

8.2.3 Collect column load samples from the appropriate steps of the full scale manufacturing Process during Stage 6 of the Services.

8.2.4 Carry out the scaled down Process for each of the **[*]**. Compare the **[*]** with the full scale manufacturing Process. This is designed to demonstrate that the scaled down Process does mimic the manufacturing Process and to generate control samples to test for **[*]**.

8.2.5 Repeat the scaled down Process for each column step, each spiked separately with **[*]**. The **[*]** will be prepared and assayed by a suitable Testing Laboratory. The column **[*]** will be carried out by LB staff working in the laboratories of the Testing Laboratory.

8.2.6 Assay **[*]** in Product containing fractions (to allow calculation of clearance factors) and in selected unbound and wash fractions to determine (where possible) where **[*]** and hence identify critical steps in the Process.

8.2.7 Measure the extent of **[*]** and rate of **[*]**.

8.2.8 Calculate **[*]** for each step by **[*]** applied by that **[*]**.

8.2.9 Issue a report of activities to the Customer.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

8.3 Timescale

Stage 8 shall commence once Product samples are obtained from Stage 6. It is estimated that Stage 8 shall be complete **[*]** from commencement.

9.0 Stage 9—Validation of Bulk Product bottling and shipping in **[*]** volumes

9.1 Objectives

9.1.1 To simulate in Lonza's GMP facility a fill of final bulk Product into **[*]** bottles with **[*]** to provide SOPs and validation for this procedure.

9.1.2 To validate shipping of final bulk product in **[*]**.

9.2 Activities

9.2.1 Simulate in Lonza's GMP facility a fill of final bulk Product into **[*]** bottles with shrink sealage.

9.2.2 Prepare appropriate SOPs for the final fill of bulk Product into **[*]**.

9.2.3 Simulate a shipment of final bulk Product in **[*]** bottles in packaging designed to maintain temperature at **[*]**.

9.3 Timescale

9.3.1 Lonza will schedule the activities under Stage 9 to be complete prior to final fill of bulk Product in Stage 6. It is estimated that these activities will take **[*]** to complete.

10.0 Stage 10—Pre-Formulation Study

10.1 Objectives

10.1.1 To monitor Product stability in a range of buffers under conditions of temperature stress as a means of selecting working formulations that confer suitable short term stability and recommending candidates for longer stability trials to evaluate as a final bulk formulation buffer.

10.2 Activities

10.2.1 **[*]** Product by **[*]** prepared during **[*]**, or alternatively, use a sample of **[*]** Product made available under **[*]**.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Adjust to an appropriate concentration to be agreed with the Customer.

Note: *Concentration should be +/-***[*]** *of the concentration that is anticipated to be used in the final formulation.*

10.2.2 **[*]** of Product into a maximum of **[*]** formulations.

Note: Choice of formulations to be agreed with the Customer before commencement and **[*]**.

Incubate samples at **[*]** for up to **[*]**. Selected **[*]** will take place.

Retention samples of unprocessed material will be kept at **[*]** for reference purposes.

10.2.3 Send samples at each time point to the Customer for evaluation of **[*]** (if appropriate).

10.2.4 Analyse samples at **[*]** by the following analytical methods (not all **[*]** will be evaluated at each timepoint):
Appearance: visual check for **[*]**
[*]: integrity
[*]: integrity
[*]: aggregates
[*]: **[*]**

10.2.5 Customer to supply LB with information on **[*]** of the Product assay results, as measured by the Customer, on samples supplied under activity 10.2.3.

Results to be included in the report to be produced under activity 10.2.6, if available.

10.2.6 Issue a report of the activities to the Customer. Make a recommendation on formulations which are suitable as short-term working formulations and which could be evaluated in longer stability studies.

10.3 Timescale

Stage 10 shall commence once samples are available from Stage 1.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Stage 10 shall be complete upon issue of the report of activities. It is estimated that this report shall be issued **[*]** from commencement of Stage 10.

11.0 Stage 11—Bulk Product Stability Studies

11.1 Objectives

11.1.1 To monitor Product stability in the selected (and, if requested by the Customer, one back-up alternative formulation) for an extended period.

11.1.2 To advise whether the formulations evaluated are suitable for long term use with the Product.

11.2 Activities

11.2.1 Agree scope of the study with the Customer: e.g. number of **[*]** to be performed at each time point, whether a back-up formulation is also to be looked at.

11.2.2 Take samples of bulk purified Product from batches to be agreed with the Customer, for example the **[*]** and/or the **[*]**. Samples will be of an appropriate volume to allow analysis of all the parameters to be measured in the study. Separate samples will be taken for each time point to be investigated. Samples will be stored in containers representative of the containers used for Product.

11.2.3 Incubate samples at **[*]** as required. Retention samples stored at **[*]** will be used for reference purposes.

Note: *It is recommended that additional samples be stored at* **[*]** *to allow extension of the Study if required and agreed between LB and the Customer. Sufficient samples will be stored to allow for assessment of* **[*]** *at the termination of each study condition.*

11.2.4 At each time point send samples to the Customer for measurement of activity. Customer to supply results to LB for the final report.

11.2.5 At each time point analyse samples at LB using the following analytical methods:

Appearance:	visual check for **[*]**
[*]	Product integrity
[*]:	aggregates

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

[*]: protein concentration
[*] particulates

Other assays may be added after agreement between LB and the Customer.

11.2.6 Issue a report to the Customer after completion of the study. Interim reports will also be provided as agreed between the Customer and LB. A summary of the results will be provided following each timepoint. Make a recommendation on the suitability of the formulation(s) tested for long term use with the Product.

11.3 Timescale

Stage 11 shall commence once samples are available.

Stage 11 shall be complete upon issue of the report of activities, the report will be issued at the end of the study. Duration of the study is to be agreed between LB and the Customer.

12.0 Stage 12—Reference Standard Characterisation and Product Equivalence Studies

12.1 Objectives

12.1.1 To analyse reference standards of Product made at LB using a number of analytical methods in addition to those used to test Product against the Specification.

12.1.2 To compare the reference standard of Product made at LB with Product made by the Customer in a **[*]** analysis.

12.2 Activities

12.2.1 Lay down a reference standard from Product produced under **[*]** and/or **[*]** of the Services. Store reference standards at **[*]**. Numbers and volumes of reference standard **[*]**, plus container type to be agreed between LB and the Customer. Receive one reference standard from the Customer of Product made by the Customer.

12.2.2 Analyse reference standards in the following analytical assays:

[*]
[*]
[*]
[*]
[*]

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

12.2.3 The Customer or LB will assay the reference standards for **[*]**.

12.2.4 Issue a report to the Customer of the results obtained and including where appropriate the tests carried out against the draft Specification.

Provide an assessment of whether these results are as expected for this Product. A description of any key differences between the reference standards will be provided (if applicable).

12.2.5 Make a recommendation in the report for any additional studies that might be required.

12.3 Timescale

Stage 12 can commence once the reference standards are available. Stage 12 will be complete upon issue of the report and it is estimated that this will be issued **[*]** from commencement of Stage 12.

13.0 Stage 13—Evaluation of LB's **[*]** with Product

13.1 Objectives

13.1.l To evaluate LB's **[*]** and assess their suitability for testing of bulk purified Product.

13.2 Activities

13.2.l Test Product samples in LB's **[*]** using a selection of **[*]**.

13.2.2 Assess if LB's **[*]** in testing bulk Product for clinical trials.

13.2.3 Provide a recommendation on whether further work is needed to develop a **[*]** suitable for testing of bulk Product for clinical trials.

13.3 Timescale

It is estimated that Stage 13 will take **[*]** to complete. This Stage will be scheduled to commence as soon as representative purified Product samples are available from other Stages in the Services.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE 3

PRICE AND TERMS OF PAYMENT

1.0 Price

In consideration for LB carrying out the Services as detailed in Schedule 2 the Customer shall pay LB, as follows

Stage		Price (UK £ sterling)
1	Cell Line Evaluation	£105,000
2	Master and Working Cell Banks	£64,000(1)
3	Purification Process Development	£73,500
4	GMP Documentation	£26,250
5	Development Pilot Batch	£79,000
6	Production of GMP Material at **[*]**	£295,000(2)
7	Manufacturing and Control Data Packages	£17,000(3)
8	Evaluation of **[*]**	£40,000(4)
9	Validation of Bulk Product bottling and shipping in **[*]** volumes	£30,000
10	Preformulation Study	£57,750
11	Bulk Product Stability Studies	£12,500 per time point
12	Reference Standard Characterisation	£50,000
13	Evaluation of **[*]** with Product	£7,000

Notes:

(1) This Price includes only cell bank testing as specified in **[*]**. Additional testing will be required (see 2.3) prior to entry into human clinical trials, and is subject to separate agreement.

(2) This Price does not include **[*]** of the EPC, laid down in **[*]**.

(3) Price for additional regulatory work to be agreed with the Customer depending on the scope of work. LB's pricing of regulatory work is based on a man-day rate of **[*]**.

(4) Plus Testing Laboratory charges at price invoiced to LB (estimated to be approximately **[*]**).

2.0 Payment

Payment by the Customer of the Price for each Stage shall be made against LB invoices on the following basis:

For all Stages apart from Stage 6 and 11, **[*]** of the Price for each Stage on commencement of that Stage, and **[*]** on completion of that Stage.

For Stage 6 **[*]** on completion of the Stage.

For Stage 11 a payment schedule will be agreed between LB and the Customer to allow for interim payments to be made to LB as the Studies progresses.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE 4

SPECIAL TERMS

At the request of Customer LB and Customer will negotiate in good faith a technology transfer agreement on terms consistent with LB’s terms of business in operation at that time.

SCHEDULE 5

TERMS FOR CONTRACT SERVICES FOR **[*]**
FOR XCYTE THERAPIES, INC.

1. Interpretation

1.1 In these Standard Terms, unless the context requires otherwise:

1.1.1 "Affiliate" means any Company, partnership or other entity which directly or indirectly controls, is controlled by or is under common control with the relevant party to this Agreement. "Control" means the ownership of more than fifty per cent (50%) of the issued share capital or the legal power to direct or cause the direction of the general management and policies of the party in question.

1.1.2 "Agreement" means any contract between LB and a Customer incorporating these Standard Terms.

1.1.3 "Cell Line" means the cell line, particulars of which are set out in Schedule 1.

1.1.4 "cGMP" means Good Manufacturing Practices and General Biologics Products Standards as promulgated under the US Federal Food Drug and Cosmetic Act at 21CFR (Chapters 210, 211, 600 and 610) and the Guide to Good Manufacturing Practices for Medicinal Products as promulgated under European Directive 91/356/EEC. LB's operational quality standards are defined in internal GMP policy documents. Additional product-specific development documentation and validation work may be required to support regulatory applications to conduct clinical trials or market a product.

1.1.5 "Customer" includes any person to whom a Proposal is issued by LB.

1.1.6 "Customer information" means all technical and other information not known to LB or in the public domain relating to the Cell Line, the Process and the Product, from time to time supplied by the Customer to LB.

1.1.7 "Customer Materials" means the Materials supplied by Customer to LB (if any) and identified as such by Schedule 1 hereto.

1.1.8 "Customer Tests" means the tests to be carried out on the Product immediately following receipt of the Product by the Customer, particulars of which are set out in Schedule 1.

1.1.9 "ex works" means LB has fulfilled its obligation to deliver when it has made the object of delivery available at its premises to the Customer or the Customer's agent (or to LB's carrier if the provisions of Clause 5.1 of this Schedule 5 apply). For the avoidance of doubt, unless otherwise agreed in writing, LB is not responsible for loading the object of delivery on to the vehicle provided by the Customer or the Customers agent (or to LB's nominated carrier if Clause 5.1 of this Schedule 5 applies) or for delaying the object of delivery for export.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.1.10 “LB Know-How” means all technical and other information relating to the Process known to LB from time to time other than confidential Customer Information and information in the public domain.

1.1.11 “Patent Rights” means all patents and patent applications of any kind throughout the world relating to the Process which from time to time LB is the owner of or is entitled to use but not in any case any patent rights owned or controlled by Customer or its licensor/supplier.

1.1.12 “Price” means the price specified in Schedule 3 for the Services.

1.1.13 “Process” means the process for the production of the Product from the Cell Line, including any improvements thereto from time to time.

1.1.14 “Product” means all or any part of the product (including any sample thereof), particulars of which are set out in Schedule 1.

1.1.15 “Proposal” means any proposal or quotation issued by LB.

1.1.16 “Services” means all or any part of the services the subject of the Agreement or Proposal (including, without limitation, cell culture evaluation, purification evaluation, master, working and extended cell bank creation, and sample and bulk production), particulars of which are set-out in Schedule 2.

1.1.17 “Special Term” means any term additional or supplemental to these Standard Terms from time to time agreed in writing between LB and the Customer. Particulars of any Special Terms at the date of the Agreement are set out in Schedule 4.

1.1.18 “Specification” means the specification for Product, particulars of which are set out In Schedule 1.

1.1.19 “Terms of Payment” means the terms of payment specified in Schedule 3.

1.1.20 “Testing Laboratories” means any third party instructed by LB to carry out tests on the Cell Line or the Product.

1.2 Unless the context requires otherwise, words and phrases defined in any other part of the Agreement shall bear the same meanings in these Standard Terms, references to the singular number include the plural and vice versa, references to Schedules are references to schedules to the Agreement, and references to Clauses are references to clauses of these Standard Terms.

1.3 In the event of a conflict between a Special Term and these Standard Terms, the Special Term shall prevail.

2. Applicability of Standard Terms

2.1 Unless agreed otherwise, these Standard Terms shall apply to every Proposal and Agreement, and to any services additional to the Services requested by a Customer. LB shall not be bound by any terms which may be inconsistent with these Standard Terms and the Special Terms. No variation of or addition to these Standard Terms and the Special Terms or any other term of an Agreement shall be effective unless in writing and signed for and on behalf of LB and Customer. For the avoidance of doubt, amendments to the draft Specification or Specification for Product shall be effective if reduced to writing and signed by the regulatory

representative of both Parties, which regulatory representative shall be nominated from time to time by the parties.

2.2 Unless previously withdrawn, a Proposal is open for acceptance within the period stated therein. Where no period is stated, the Proposal shall be open for acceptance within thirty (30) days from the date it is issued unless withdrawn in the meantime. Any acceptance by a Customer of a Proposal shall not create a binding contract.

2.3 A binding contract shall only be created when LB has accepted in writing an offer placed by a Customer.

3. Supply by Customer

3.1 Prior to or immediately following the date of the Agreement the Customer shall supply to LB the Customer Information, together with full details of any hazards relating to the Cell Line and/or the Customer Materials, their storage and use. On review of this Customer Information, the Cell Line and/or the Customer Materials shall be provided to LB at LB's request. Property in the Cell Line and/or the Customer Materials supplied to LB shall remain vested in the Customer.

3.2 The Customer hereby grants LB the non-exclusive right to use the Cell Line, the Customer Materials and the Customer Information for the purpose of the Agreement. LB hereby undertakes not to use the Cell Line, the Customer Materials or the Customer Information (or any part thereof) for any other purpose.

3.3 LB shall:

3.3.1 at all times use all reasonable endeavours to keep the Cell Line and/or the Customer Materials secure and safe from loss and damage in such manner as LB stores its own material of similar nature;

3.3.2 not part with possession of the Cell Line and/or the Customer Materials or the Product, save for the purpose of tests at the Testing Laboratories; and

3.3.3 procure that all Testing Laboratories are subject to obligations of confidence and restrictions to use and transfer substantially in the form of those obligations of confidence imposed on LB under these Standard Terms.

3.4 The Customer warrants to LB that:

3.4.1 the Customer is and shall at all times throughout the duration of the Agreement remain entitled to supply the Cell Line, the Customer Materials and Customer Information to LB;

3.4.2 to the best of the Customer's knowledge and belief the use by LB of the Cell Line, the Customer Materials or and the Customer Information for the Services will not infringe any rights (including, without limitation, any intellectual or industrial property rights) vested in any third party; and

3.4.3 the Customer will notify LB, in writing, immediately it knows or ought to know that it is no longer entitled to supply the Cell Line, the Customer Materials and/or the Customer Information to LB or that the use by LB of the Cell Line, the Customer Materials or the Customer Information for the Services infringes or is alleged to infringe any rights (including, without limitation, any intellectual or industrial property rights) vested in any third party.

3.5 Provided that LB gives Customer prompt written notice and full particulars of any claim, tenders to Customer, full control of any defense or settlement and co-operates fully with Customer, the Customer undertakes to indemnify and to maintain LB promptly indemnified against any loss, damage, costs and expenses of any nature (including court costs and legal fees on a full indemnity basis), whether direct or consequential, and whether or not foreseeable or in the contemplation of LB or the Customer, that LB may suffer arising out of or incidental to any breach of the warranties given by the Customer under Clause 3.4 above or any claims alleging LB's use of the Cell Line, the Customer Materials or the Customer Information infringes any rights (including, without limitation, any intellectual or industrial property rights) vested in any third party (whether or not the Customer knows or ought to have known about the same), however it is agreed that LB will retain its own independent legal counsel with settlement of any claim requiring LB's prior written consent which shall not be unreasonably withheld.

3.6 The obligations of LB and the Customer under this Clause 3 shall survive the termination for whatever reason of the Agreement.

4. Provision of the Services

4.1 LB shall diligently carry out the Services as provided in Schedule 2 and shall use all reasonable efforts to achieve the estimated timescales therefor.

4.2 Due to the unpredictable nature of the biological processes involved in the Services, the timescales set down for the performance of the Services (including without limitation the dates for production and delivery of Product) and the quantities of Product for delivery set out in Schedule 2 are estimated only.

4.3 Provided that LB has complied with Section 4.1 the Customer shall not be entitled to cancel any unfulfilled part of the Services or to refuse to accept the Services on grounds of late performance, late delivery or failure to produce the estimated quantities of Product for delivery. LB shall not be liable for any loss, damage, costs or expenses of any nature, whether direct or consequential, occasioned by:

4.3.1 any delay in performance or delivery howsoever caused; or

4.3.2 any failure to produce the estimated quantities of Product for delivery.

4.4 LB shall comply with the regulatory requirements from time to applicable to the Services as set out in Schedule 2 hereto, including without limitation all relevant requirements of current Good Manufacturing Practices under the policies and practices of the US FDA and European Regulatory Authorities and shall consider ICH and other relevant regulatory guidance documents whether or not set forth with precision in said Schedule 2. If the Customer requests LB to comply with any other regulatory or similar legislative requirements LB shall use all reasonable commercial endeavours to do so provided that:

4.4.1 the Customer shall be responsible for informing LB in writing of the precise foreign requirements which the Customer is requesting LB to observe;

4.4.2 such foreign requirements do not conflict with any mandatory requirements under the laws of England;

4.4.3 LB shall be under no obligation to ensure that such written information complies with the applicable requirements of any foreign jurisdiction; and

4.4.4 all costs and expenses incurred by LB in complying with such foreign requirements shall be charged to the Customer in addition to the Price.

4.5 Delivery of Product shall be ex-works LB's premises (Incoterms 1990). Risk in and title to Product shall pass on delivery. Transportation of Product, whether or not under any arrangements made by LB on behalf of the Customer, shall be made at the sole risk and expense of the Customer.

4.6 Unless otherwise agreed, LB shall package and label Product for delivery ex-works in accordance with its standard operating procedures. It shall be the responsibility of the Customer to inform LB in writing in advance of any special packaging and labelling requirements for Product. All additional costs and expenses of whatever nature incurred by LB in complying with such special requirements shall be charged to the Customer in addition to the Price.

5. Transportation of Product and Customer Tests

5.1 If requested by the Customer, LB will (acting as agent of the Customer for such purpose) arrange the transportation of Product from LB's premises to the destination indicated by the Customer together with insurance cover for Product in transit at its invoiced value. All additional costs and expenses of whatever nature incurred by LB in arranging such transportation and insurance shall be charged to the Customer in addition to the Price.

5.2 Where LB has made arrangements for the transportation of Product, the Customer shall diligently examine the Product as soon as practicable after receipt. Notice of all claims (time being of the essence) arising out of:

5.2.1 damage to or total or partial loss of Product in transit shall be given in writing to LB and the carrier within three (3) working days of delivery; or

5.2.2 non-delivery shall be given in writing to LB within ten (10) days after the date of LB's dispatch notice.

5.3 The Customer shall make damaged Product available for inspection and shall comply with the requirements of any insurance policy covering the Product notified by LB to the Customer. LB shall offer the Customer all reasonable assistance (at the cost and expense of the Customer) in pursuing any claims arising out of the transportation of Product.

5.4 Promptly following receipt of Product or any sample thereof, the Customer shall carry out the Customer Tests. PROVIDED ALWAYS the Specification for such Product is not stated to be in draft form, if the Customer Tests show that the Product fails to meet Specification, the Customer shall give LB written notice thereof within forty-five (45) days from the date of delivery of the Product ex-works and shall return such Product to LB's premises for further testing. In the absence of such written notice Product shall be deemed to have been accepted by the Customer as meeting Specification. If LB is satisfied that Product returned to LB fails to meet Specification and that such failure is not due (in whole or in part) to acts or omissions of the Customer or any third party after delivery of such Product ex-works, LB shall at Customer's discretion refund that part of the Price

that relates to the production of such Product or replace such Product at its own cost and expense. In the event Customer requires LB to replace such Product, LB shall be entitled to have regard to its commercial commitments to third parties in the timing of such replacement and will consider Customer's requirements in as fair and equal manner as it considers other third party customer requirements, Customer acknowledges that there may, therefore, be a delay in the timing of the replacement of such Product.

FOR THE AVOIDANCE OF DOUBT, WHERE THE SPECIFICATION IS STATED TO BE IN DRAFT FORM LB SHALL BE OBLIGED ONLY TO USE ITS REASONABLE ENDEAVOURS TO PRODUCE PRODUCT THAT MEETS SPECIFICATION.

5.5 If there is any dispute concerning whether Product returned to LB, fails to meet Specification or whether such failure is due (in whole or in part) to acts or omissions of the Customer or any third party after delivery of such Product ex-works, such dispute shall be referred for decision to an independent expert (acting as an expert and not as an arbitrator) to be appointed by agreement between LB and the Customer or, in the absence of agreement by the President for the time being of the Association of the British Pharmaceutical Industry. The costs of such independent expert shall be borne equally between LB and the Customer. The decision of such independent expert shall be in writing and, save for manifest error on the face of the decision, shall be binding on both LB and the Customer.

5.6 The provisions of Clauses 5.4 and 5.5 shall be the sole remedy available to the Customer in respect of Product that fails to meet Specification.

6. Price and Terms of Payment

6.1 The Customer shall pay the Price in accordance with the Terms of Payment.

6.2 Unless otherwise indicated in writing by LB. all prices and charges are exclusive of Value Added Tax or of any other applicable taxes, levies, imposts, duties and fees of whatever nature imposed by or under the authority of any government or public authority, which shall be paid by the Customer (other than taxes on LB's income). All Invoices are strictly net and payment must be made within thirty (30) days of date of invoice. Payment shall be made without deduction, deferment, set-off, lien or counterclaim of any nature.

6.3 In default of payment on due date:

6.3.1 interest shall accrue on any amount overdue at the rate of **[*]** above the base lending rate from time to time of HSBC Bank plc, interest to accrue on a day to day basis both before and after judgement; and

6.3.2 LB shall, at its sole discretion, and without prejudice to any other of its accrued rights, be entitled to suspend the provision of the Services or to treat the Agreement as repudiated by notice in writing to the Customer exercised at any time thereafter.

7. Warranty and Limitation of Liability

7.1 LB warrants that:

7.1.1 the Services shall be performed in accordance with Clause 4.1; and

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

7.1.2 the Product shall meet Specification on delivery, save where the Specification is stated to be in draft form when LB shall be obliged only to use its reasonable endeavours to produce Product that meets Specification.

7.2 Clause 7.1 is in lieu of all conditions, warranties and statements in respect of the Services and/or the Product whether expressed or implied by statute, custom of the trade or otherwise (including but without limitation any such condition, warranty or statement relating to the description or quality of the Product, its fitness for a particular purpose or use under any conditions whether or not known to LB) and any such condition, warranty or statement is hereby excluded.

7.3 Without prejudice to the terms of Clauses 5.6, 7.1. 7.2, 7.4 and 7.6, the liability of LB for any loss or damage suffered by the Customer as a direct result of any breach of the Agreement or of any other liability of LB (including misrepresentation and negligence or third party claim brought against Customer relating solely to LB know-how) in respect of the Services (including without limitation the production and/or supply of the Product) shall be limited to the payment by LB of damages which shall not exceed pounds sterling nine hundred and nineteen thousand and five hundred (£919,500).

7.4 Subject to Clause 7.6, LB shall not be liable for the following loss or damage howsoever caused (even if foreseeable or in the contemplation of LB or the Customer):

7.4.1 loss of profits, business or revenue whether suffered by the Customer or any other person; or

7.4.2 special, indirect or consequential loss, whether suffered by the Customer or any other person; and

7.4.3 any loss arising from any claim made against the Customer by any other person.

7.5 Provided that LB gives Customer prompt written notice and full particulars of any claim, tenders to Customer, full control of any defense or settlement, and co-operate fully with Customer, the Customer shall indemnify and maintain LB promptly indemnified against all claims, actions, costs, expenses of any nature (including court costs and legal fees on a full indemnity basis) or other liabilities whatsoever in respect of the following, it been agreed, however that LB will retain its own independent legal counsel with settlement of any claim requiring LB’s prior written consent which will not be unreasonably withheld:

7.5.1 any liability under the Consumer Protection Act 1987, unless such liability is caused by the negligent act or omission of LB in the production and/or supply of the Product; and

7.5.2 any product liability (other than that referred to in Clause 7.5.1) in respect of Product, unless such liability is caused by the negligent act or omission of LB in the production and/or supply of Product; and

7.5.3 any negligent or willful act or omission of the Customer in relation to the use, processing, storage or sale of the Product.

7.6 Nothing contained in these Standard Terms shall purport to exclude or restrict any liability for death or personal injury resulting directly from negligence by LB in

carrying out the Services or any liability for breach of the implied undertakings of LB as to title.

7.7 The obligations of LB and the Customer under this Clause 7 shall survive the termination for whatever reason of the Agreement.

8. Customer Information, LB Know-How and Patent Rights

8.1 The Customer acknowledges that LB Know-How and LB acknowledges that Customer Information with which it is supplied by the other pursuant to the Agreement is supplied, subject to Clause 8.4, in circumstances imparting an obligation of confidence and each agrees to keep such LB Know-How or such Customer Information secret and confidential and to respect the other's proprietary rights therein and not at any time for any reason whatsoever to disclose or permit such LB Know-How or such Customer Information to be disclosed to any third party save as expressly provided herein.

8.2 The Customer and LB shall each procure that all their respective employees, consultants and contractors having access to confidential LB Know-How or confidential Customer Information shall be subject to the same obligations of confidence as the principals pursuant to Clause 8.1 and shall enter into secrecy agreements in support of such obligations. Insofar as this is not reasonably practicable, the principals shall take all reasonable steps to ensure that any such employees, consultants and contractors are made aware of such obligations.

8.3 LB and the Customer each undertake not to disclose or permit to be disclosed to any third party, or otherwise make use of or permit to be made use of, any trade secrets or confidential information relating to the technology, business affairs or finances of the other, any subsidiary, holding company or subsidiary or any such holding company of the other, or of any suppliers, agents, distributors, licensees or other customers of the other which comes into its possession under this Agreement.

8.4 The obligations of confidence referred to in this Clause 8 shall not extend to any information which:

8.4.1 is or becomes generally available to the public otherwise than by reason of a breach by the recipient party of the provisions of this Clause 8;

8.4.2 is known to the recipient party and is at its free disposal prior to its receipt from the other;

8.4.3 is subsequently disclosed to the recipient party without being made subject to an obligation of confidence by a third party;

8.4.4 LB or the Customer may be required to disclose under any statutory, regulatory or similar legislative requirement, subject to the imposition of obligations of secrecy wherever possible in that relation; or

8.4.5 is developed by any servant or agent of the recipient party without access to or use or knowledge of the information by the disclosing party.

8.5 The Customer acknowledges that:

8.5.1 LB Know-How and the Patent Rights are vested in LB or LB is otherwise entitled thereto; and

8.5.2 the Customer shall not at any time have any right, title, license or interest in or to LB Know-How, the Patent Rights or any other intellectual property rights relating to the Process which are vested in LB or to which LB is otherwise entitled.

8.6 LB acknowledges that:

8.6.1 Customer has undertaken that the Customer Information is vested in the Customer or the Customer is otherwise entitled thereto; and

8.6.2 save as provided herein LB shall not at any time have any right, title, license or interest in or to the Customer information or any other Intellectual Property rights vested in Customer or to which the Customer is entitled.

8.7 The obligations of LB and the Customer under this Clause 8 shall survive the termination for whatever reason of the Agreement.

9. Termination

9.1 If it becomes apparent to either LB or the Customer at any stage in the provision of the Services that it will not be possible to complete the Services for scientific or technical reasons, a sixty (60) day period shall be allowed for discussion to resolve such problems. If such problems are not resolved within such period, LB and the Customer shall each have the right to terminate the Agreement forthwith by notice in writing. In the event of such termination, the Customer shall pay to LB a termination sum calculated by reference to all the Services performed by LB prior to such termination (including a pro rata proportion of the Price for any stage of the Services which is in process at the date of termination) and all expenses reasonably incurred by LB in giving effect to such termination, including the costs of terminating any commitments entered into under the Agreement, such termination sum not to exceed the balance of the Price for the remaining services not yet commenced, LB will engage in good faith efforts to offer to other third party customers those development resources or manufacturing slots which become available due to termination by Customer of this Agreement, and Customer will not be required to pay for that portion of the Services and related expenses that LB is able to charge to such other customers.

9.2 Customer shall be entitled to terminate this Agreement at any time for any reason by sixty (60) days' notice to LB in writing. In the event of Customer serving notice to terminate this Agreement which notice is expressed to be given pursuant to this Clause 9.2, Customer shall:

9.2.1 pay LB a termination sum calculated in accordance with the principles of Clause 9.1 above, and

9.2.2 In the event notice to terminate this Agreement pursuant to this Clause 9.2 is issued to LB within six (6) months of LB's then estimated start date for any stage of the Services which includes cGMP fermentation activities, Customer shall pay LB a sum (to the extent not already payable as noted above in accordance with the principles of Clause 9.1) equal to not less than ten percent (10%) nor more than eighty-five percent (85%) of the full Price of that stage, or those stages, in question, as provided in Clause 9.2.3

below. Such payment shall fall due to LB on or before the date of termination of the Services. For the avoidance of doubt activities relating to cGMP fermentation shall be deemed to commence with the date of removal of the vial of cells for the performance of the fermentation from frozen storage.

9.2.3 In the event of Customer serving notice to terminate this Agreement in the circumstances described in Clause 9.2.2, LB shall use reasonable endeavours to substitute a requirement for the manufacturing slot which becomes available due to Customer of the Agreement. If LB finds such an alternative third party selling the manufacturing slot, which third party requirement is not for business (i.e. LB shall not be required to reschedule parties), the fee payable by Customer under Clause 10% of the price for the manufacturing slot originally amount, if any, by which the fees to be paid for such customer is less than 85% of the price under this originally reserved for Customer. If LB is substitute a third party requirement for the such manner, Customer shall be liable to of the price under this Agreement third party termination by and is successful in previously contracted existing commitments to third parties), the fee payable by Customer under Clause 9.2.2 shall equal the greater of (a) reserved for Customer and (b) the manufacturing slot by such other Agreement for the manufacturing slot unable, by using reasonable endeavours, to manufacturing slot reserved for Customer in pay LB under Clause 9.2.2 a sum equal to 85% for the manufacturing slot.

9.3 LB and the Customer may each terminate the Agreement forthwith by notice in writing to the other upon the occurrence of any of the following events:

9.3.1 if the other commits a breach of the Agreement which (in the case of a breach capable of remedy) is not remedied within thirty (30) days of the receipt by the other of notice identifying the breach and requiring its remedy; or

9.3.2 if the other ceases for any reason to carry on business or compounds with or convenes a meeting of its creditors or has a receiver or manager appointed in respect of all or any part of its assets or is the subject of an application for an administration order or of any proposal for a voluntary arrangement or enters into liquidation (whether compulsorily or voluntarily) or undergoes any analogous act or proceedings under foreign law.

9.4 Upon the termination of the Agreement for whatever reason:

9.4.1 LB shall promptly return all Customer Information to the Customer and shall dispose of or return to the Customer the Customer Materials (and where supplied by Customer the Cell Line) and any materials therefrom, as directed by the Customer;

9.4.2 the Customer shall promptly return to LB all LB Know-How it has received from LB;

9.4.3 the Customer shall not thereafter use or exploit the Patent Rights or the LB Know-How in any way whatsoever;

9.4.4 LB may thereafter use or exploit the Patent Rights or the LB Know-How in any way whatsoever without restriction; and

9.4.5 LB and the Customer shall do all such acts and things and shall sign and execute all such deeds and documents as the other may reasonably require to evidence compliance with this Clause 9.4.

9.5 Termination of the Agreement for whatever reason shall not affect the accrued rights of either LB or the Customer arising under or out of this Agreement and all provisions which are expressed to survive the Agreement shall remain in full force and effect.

10. Force Majeure

10.1 If LB is prevented or delayed in the performance of any of its obligations under the Agreement by Force Majeure and shall give written notice thereof to the Customer specifying the matters constituting Force Majeure together with such evidence as LB reasonably can give and specifying the period for which it is estimated that such prevention or delay will continue, LB shall be excused from the performance or the punctual performance of such obligations as the case may be from the date of such notice for so long as such cause of prevention or delay shall continue.

10.2 The expression “Force Majeure” shall be deemed to include any cause affecting the performance by LB of the Agreement arising from or attributable to acts, events, acts of God, omissions or accidents beyond the reasonable control of LB.

11. Governing Law, Jurisdiction and Enforceability

11.1 The construction, validity and performance of the Agreement shall be governed by the laws of England, to the jurisdiction of whose courts LB and the Customer submit.

11.2 No failure or delay on the part of either LB or the Customer to exercise or enforce any rights conferred on it by the Agreement shall be construed or operate as a waiver thereof nor shall any single or partial exercise of any right, power or privilege or further exercise thereof operate so as to bar the exercise or enforcement thereof at any time or times thereafter.

11.3 The illegality or invalidity of any provision (or any part thereof) of the Agreement or these Standard Terms shall not affect the legality, validity or enforceability of the remainder of its provisions or the other parts of such provision as the case may be.

12. Miscellaneous

12.1 Neither party shall be entitled to assign, transfer, charge or in any way make over the benefit and/or the burden of this Agreement without the prior written consent of the other which consent shall not be unreasonably withheld or delayed, save that either LB or the Customer shall respectively be entitled without the prior written consent of the other to assign, transfer, charge, sub-contract, deal with or in any other manner make over the benefit and/or burden of this Agreement to an

Affiliate or to any 50/50 joint venture company of which either party is the beneficial owner or fifty per cent (50%) of the issued share capital thereof or to any company with which either party may merge or to any company to which that party may transfer its assets and undertakings.

12.2 The text of any press release or other communication to be published by or in the media concerning the subject matter of the Agreement shall require the prior written approval of LB and the Customer.

12.3 The Agreement embodies the entire understanding of LB and the Customer and there are no promises, terms, conditions or obligations, oral or written, expressed on implied, other than those contained in the Agreement. The terms of the Agreement shall supersede all previous agreements (if any) which may exist or have existed between LB and the Customer relating to the Services.

Exhibit 10.44

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [*****]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

AGREEMENT

For Services Relating to the Cell Line Known as [*]

Expressing Product XR-[*]

Between

LONZA BIOLOGICS PLC

And

XCYTE THERAPIES, INC.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

AGREEMENT

For Services Relating to the Cell Line Known as **[*]**

Expressing Product XR-**[*]**

between

LONZA BIOLOGICS PLC

and

XCYTE THERAPIES, INC.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

THIS AGREEMENT is made the 6 day of June, 2000

BETWEEN

1. LONZA BIOLOGICS PLC, the registered office of which is at 228 Bath Road, Slough, Berkshire SL1 4DY, England ("LB"), and

2. XCYTE THERAPIES, INC., of 1124 Columbia Street, Suite 130, Seattle, Washington 98104, USA, ("Customer").

WHEREAS

A. Customer is the proprietor of, or licensed to use, the Cell Line **[*]** (designated at LB as **[*]**) expressing Product XR-**[*]**, and

B. LB has the expertise in the development of process for and manufacture of similar products, and

C. Customer wishes to contract with LB for services to develop a Process for and manufacture Product, and

D. LB is prepared to perform such Services for Customer on the terms and conditions set out herein, and

E. LB will where scientifically possible perform such Services in parallel with Services to produce Product XR-**[*]** for Customer.

NOW THEREFORE it is agreed as follows:

1. In this Agreement, its recitals and the schedules hereto, the words and phrases defined in Schedule 4 hereto and in the Standard Terms for Contract Services set out in Schedule 5 hereto shall have the meanings set out therein.

2. Subject to the Standard Terms for Contract Services set out in Schedule 5 and any Special Terms, LB agrees to perform the Services and the Customer agrees to pay the Price together with any additional costs and expenses that fall due hereunder.

3. 3.1 Any notice or other communication to be given under this Agreement shall be delivered personally or sent by facsimile transmission, or if facsimile transmission is not available, by first class pre-paid post addressed as follows:

3.1.1 if to LB to:

Lonza Biologics plc
228 Bath Road

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Slough
Berkshire SL1 4DY

Facsimile: 01753 777001
For the attention of the Head of Legal Services

3.1.2 if to the Customer to:

Xcyte Therapies, Inc.
1124 Columbia Street
Suite 130
Seattle
Washington 98104

Facsimile: 206 262 0900
For the attention of Director, Business Development

or to such other destination as either party hereto may hereafter notify to the other in accordance with the provisions of this clause.

3.2 All such notices or other communications shall be deemed to have been served as follows:

3.2.1 if delivered personally, at the time of such delivery;

3.2.2 if sent by facsimile, upon receipt of the transmission confirmation slip showing completion of the transmission;

3.2.3 if sent by first class pre-paid post, ten (10) business days (Saturdays, Sundays and Bank or other public holidays excluded) after being placed in the post.

AS WITNESS the hands of the duly authorised representatives of the parties hereto the day and year first above written.

Signed for and on behalf of
LONZA BIOLOGICS PLC

/s/ Edwin Davies

President

Title

Signed for and on behalf of
XCYTE THERAPIES, INC.

/s/ Ronald Jay Berenson

President & CEO

Title

SCHEDULE 1

For the purposes of this document Cell Line shall mean the **[*]** cell line **[*]** (designated at LB as **[*]**), expressing the **[*]** XR-**[*]**.

Product shall mean the anti-**[*]** antibody, XR-**[*]**.

A. **DRAFT SPECIFICATION FOR BULK PURIFIED PRODUCT**

Note: After completion of **[*]** of the Services, Lonza and the Customer agree to review performance against the draft Specification and to agree the timeframe for moving to a full Specification.

TEST		METHOD	SPECIFICATION
		(LB SOPs)	
1.1	Appearance	60516C	[*]
1.2	Particulates	60516C	Report result. For information only.
1.3	pH at [*]	60328C	As determined by LB under the Services.
1.4	Protein concentration [*] [*]	60284C	To be set by the Customer as between [*]
1.5	Purity	60359C	Greater than or equal to [*].
	Reduced [*]		Report result
	Non-reduced [*]		
1.6	[*]	60334C	[*] greater than or equal to [*]. Less than or equal to [*].
1.7	[*]	60512C	Report result. Compare to reference.
Note:	[*].		
1.8	Isotype	tbd	[*]
1.9	Extended [*]	60288C (21 CFR 610.12) (EP & USP)	[*] detected after [*] days
1.10	Mycoplasmas (production fermenter at harvest)	(FDA points to consider 1993)	[*].
1.11	Endotoxins (LAL colorimetric)	60186C	Less than or equal to [*].
1.12	[*] DNA (Hybridisation)	60461C	Less than or equal to [*].
1.13	[*]	60433C	Less than or equal to [*].
1.14	Bovine serum albumin (if appropriate)	60445C	Less than or equal to [*].
1.15	Tropolone	Development assay	For information only.
1.16	Recombinant human insulin	60448C	Less than or equal to [*].
1.17	Host cell protein	Development assay	For information only.
1.18	Virus testing (production fermenter). Testing will be carried out by a Testing Laboratory. Samples taken from the production fermenter [*]:		
	[*]		Report result*
	[*]		Report result*
	[*]		Negative
	[*]		
***Note:**	*If fermenter result is [*], the final Product will be tested for [*] as appropriate. Product will only meet the draft Specification if these tests are [*]. In the event that the fermenter sample is [*], an [*] test will be performed on the [*] for quantification.*		
	Number of virus-like particles per ml of bulk harvest (EM)		Report result
2.	Final Formulation Buffer	:	To be determined by LB under the Services
3.	Bottling of Bulk Product:		
	3.1 Containers	:	[*] bottles.
	3.2 Denominations	:	[*] (Customer samples). Bulk to be agreed.
Note:	*The Customer may request that LB bottles Product in [*] that are not standard to LB's GMP operation. If so the validation studies under Stage 9 may be required to be performed under the services [*].*		
4.	Product Storage Conditions	:	Store at greater than or equal to [*], less than or equal to [*].
5.	Shipment Temperature	:	Product shipped at greater than 0ºC, less than or equal to [*].

6.	Labelling	:	Plain, white, matt, permanent, thermal transfer labels [*]. Label information to contain Product name, Cell Line name, Lot number, Date of Manufacture, [*] and Storage Information.

B. **SPECIFICATION FOR A MASTER OR WORKING CELL BANK**

Starting Material Definition

Master or Working Cell Bank of a cryopreserved **[*]** cell line prepared from a pooled culture and stored in individual ampoules in liquid nitrogen refrigerators.

1. The acceptance criteria for tests performed on ampoules from the cell bank

TEST	METHOD	SAMPLE SIZE	SPECIFICATION
Viability & Homogeneity	LB (51200C)	[*]	Viable
Mycoplasma	DNA stain; FDA Points to Consider 1993	[*]	[*]
Mycoplasma	Direct Isolation; 21 CFR 610.30 and FDA Points to Consider 1993		[*]
Sterility	21 CFR 610.12 & USP, EP (LBA 60159C) detected after 14 days	[*]	[*]

2. The acceptance criteria for tests performed on ampoules of the Cell Bank or on ampoules of cell stocks linearly related to the Cell Bank, tests to be performed on cell lines before entry into LB's GMP facility, using accredited LB Testing Laboratories.

TEST	SPECIFICATION
Species Identity (Isoenzyme analysis)	Typical for a [*] cell line.
[*]	[*]
[*] Antibody Production	[*]

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE 2

SERVICES

CONTENTS

1. Supply of Customer Materials and Customer Know-How
2. Activities to be undertaken by LB:

Stage 1— Cell Line Evaluation
Stage 2— Master and Working Cell Bank Preparation and Analysis
Stage 3— Purification Process Development
Stage 4— cGMP Documentation
Stage 5— Development Pilot Batch at **[*]**
Stage 6— Production of cGMP Material at **[*]**
Stage 7— Manufacturing and Control Data Packages
Stage 8— Evaluation of Retrovirus Clearance
Stage 9— Validation of Bulk Product bottling and shipping in **[*]** volumes
Stage 10— Preformulation Study
Stage 11— Bulk Product Stability Studies
Stage 12— Reference Standard Characterisation and Product Equivalence Studies
Stage 13— Evaluation of LB's **[*]** with Product

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1. SUPPLY OF CUSTOMER MATERIALS AND CUSTOMER KNOW HOW

Customer shall supply to LB the following:

i) Information on the Cell Line and the Product to allow a safety assessment by LB's Biological Safety Committee. This information has to be reviewed before the Cell Lines can be sent to LB.

ii) At least **[*]** of viable frozen cells of the Cell Line, containing approximately **[*]**. The Cell Line is understood to be fully cloned and suitable for the development programme outlined in the Services. The Customer may supply the Cell Line in the form of a cell stock or a Customer cell bank.

iii) A purified reference standard for each of the Products (approximately 10mg samples if possible).

2. ACTIVITIES TO BE UNDERTAKEN BY LB

1.0 Stage 1—Cell Line Evaluation

1.1 Objectives

1.1.1 To adapt the Cell Line to suspension culture in LB's **[*]** for **[*]** cell lines and to choose a final production medium.

1.1.2 To monitor stability of production.

1.1.3 To determine fermentation production kinetics and establish a fermentation Process for production of Product using the chosen production medium.

1.2 Activities

1.2.1 Send ampoules of the incoming Cell Line to a Testing Laboratory to be tested by assay for **[*]**.

1.2.2 Using the Product reference standard provided by the Customer evaluate LB's **[*]**.

1.2.3 After receiving confirmation that the incoming Cell Line is **[*]**, adapt the Cell Line to growth in suspension in LB's **[*]**. Screen by allowing **[*]** and measure **[*]**.

Deliver samples of culture supernatant and appropriate medium control from the **[*]** to the Customer to enable the Customer to confirm **[*]** by an **[*]** assay.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.2.4 Purify a small quantity of antibody from the supernatants of the adapted Cell Line by **[*]**. Compare to the appropriate reference standard.

Deliver samples (generally less than **[*]**) of purified Product to the Customer. The Customer would like to receive **[*]** samples if possible at this point. If this quantity can not be achieved LB may agree to provide additional material to the Customer.

1.2.5 **[*]** of the Cell Line.

1.2.6 Prepare an interim report for the Customer.

Evaluation Point: At this point LB will provide the Customer with a brief interim report and the Customer and LB will make a preliminary evaluation of Cell Line **[*]** and the Customer will assess the **[*]** of Product produced by the Cell Line. The Customer and LB will agree at this point whether to conduct the remainder of the Services in **[*]** medium.

1.2.7 Assess stability of production of the Cell Line in **[*]** culture for at least **[*]**. Confirm Product **[*]** by **[*]** and **[*]**. Deliver supernatant samples to the Customer to enable the Customer to confirm **[*]** activity of the Product.

Evaluation Point: At this point the Customer and LB may assess the suitability of the Cell Line for large scale production.

1.2.8 Evaluate growth of the Cell Line to determine if LB's **[*]** regime is appropriate.

1.2.9 Carry out a **[*]** in two laboratory scale **[*]**, using a **[*]**, to determine the **[*]**.

1.2.10 Conduct preliminary studies on **[*]**.

1.2.11 Determine Product concentration during the laboratory scale **[*]** by **[*]** and **[*]**.

1.2.12 Issue report of activities to the Customer. This report shall include the following:

— Details of key experimental data generated in Stage 1.

— An assessment of the performance of the Cell Line at laboratory scale.

— A preliminary estimate of the expected yield from the selected Cell Line at production scale.

Note: *In all reports to the Customer any techniques or reagents used which are proprietary to LB will be described in outline only.*

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.3 Timescale

Stage 1 shall be complete with the issue of the report of activities and it is estimated that this report will be issued within **[*]** from the start of Stage 1.

Stage 2 (Cell Banking) can commence at the Customer's request any time after activity 1.2.5 is complete i.e. the PSS is available. It is estimated that activity 1.2.5 will be complete **[*]** after commencement of Stage 1.

2.0 Stage 2—Master and Working Cell Bank Preparation and Analysis

2.1 Objectives

2.1.1 Create and characterise a master and working cell bank (MCB and WCB).

2.1.2 To test the PSS (Stage 1, 1.2.5) of the Cell Line such that sufficient test information is available for rapid transfer of the Cell Line to LB's GMP manufacturing facility. Testing for potential adventitious agents is required so that all cell lines and products are protected for customers.

2.2 Activities

2.2.1 Send an **[*]** (Stage 1, 1.2.5) of the Cell Line for **[*]** to a Testing Laboratory **[*]**.

2.2.2 Send **[*]** of the Cell Line to Testing Laboratories to be tested by:

a) Assay for viruses:
[*]
[*]

b) Isoenzyme analysis

2.2.3 Prepare documentation, as approved by LB's Quality Services Department for the preparation of the cell banks from the PSS.

2.2.4 Establish a **[*]** MCB and a **[*]** WCB according to GMP. The MCB will be derived from **[*]** of the PSS and the WCB will be derived from **[*]** of the MCB. The cell banking system is designed in line with the "Points to Consider in the Characterisation of Cell Lines used to Produce Biologicals" (1993—Food and Drug Administration), and the "Production and Quality Control of Monoclonal Antibodies" (Adopted July 1995: Commission of the European Communities).

2.2.5 Establish standard maintenance, storage and release procedures for the MCB and WCB on and off the LB production site.

2.2.6 Characterise the MCB and WCB :-
[*].

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Assess cell bank viability from **[*]** distributed through the bank. Evaluate **[*]** from the MCB and WCB following LB's **[*]** and measure **[*]**.

2.2.7 Issue report of activities to Customer. The report shall include:

a description of the preparation of the cell banks;
details of the history of the Cell Line at LB;
mycoplasma and sterility test results on the cell banks;
details of cell growth characteristics for the Cell Line;
details of materials and methods used for activities under Stage 2;
a summary of LB's storage and control procedures for the cell banks;
Testing Laboratory reports.

2.3 Cell Bank Characterisation (Viruses)

Additional cell bank characterisation will be required in order to support regulatory applications to conduct clinical trials, or market a product. LB can arrange for such testing at LB's approved contractors on the Customer's behalf or alternatively deliver ampoules of the Cell Line to the Customer for performance of this testing.

Such testing should take place on the MCB, WCB, and the end of production cell bank EPC (see 6.2.3). LB if requested by the Customer, can review with the Customer strategies for cell bank testing.

Note: *This proposal makes provision for testing of the PSS to enable rapid transfer of the Cell Line into LB's manufacturing facility. These tests on the PSS enable the cell banks to meet the cell bank specification (Schedule 1). However, for initiation of clinical trials the cell banks also need to be tested.*

2.4 Timescale

Stage 2 shall be complete with the issue of the report of activities and it is estimated that this report will be issued **[*]** from the start of Stage 2. It is estimated that the **[*]** MCB will be established **[*]** from the start of Stage 2 and the **[*]** WCB will be established **[*]** from the start of Stage 2. Stage 2 will commence once Stage 1, activity 1.2.7 is completed.

3.0 Stage 3—Purification Process Development

3.1 Objectives

3.1.1 To establish a **[*]** suitable for manufacture of Product at **[*]**.

3.1.2 To provide a sample of Product purified using the selected Process to the Customer for evaluation.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

3.2 Activities

3.2.1 Receive **[*]** from the Cell Line produced under Stage 1 of the Services (either **[*]**).

3.2.2 Measure Product **[*]** and quantify by **[*]** of a sample purified by **[*]**.

3.2.3 Determine the **[*]** for the Product.

3.2.4 Evaluate **[*]** and **[*]**. Measure **[*]**.

The Product will be treated at **[*]** following **[*]**. This step is designed to **[*]**.

3.2.5 **[*]** for the next step.

At least **[*]** will be included. This will be **[*]**. It may be necessary to follow this by either **[*]**. The final selection of **[*]** will depend on the characteristics of the Product.

For each **[*]** the composition of the **[*]**, **[*]** will be evaluated. **[*]** after each step.

3.2.6 Evaluate a **[*]** to be inserted into the **[*]** at an appropriate point.

3.2.7 **[*]** Product into final **[*]**.

3.2.8 Analyse Product **[*]**. Measure levels of **[*]** (if appropriate), **[*]** and **[*]** Product.

3.2.9 Deliver a **[*]** of Product produced at **[*]** to Customer for evaluation.

3.2.10 Issue report of activities to Customer. This report shall include:

- **[*]**
- **[*]** operation
- copies of **[*]** analysis results
- details of materials and methods used for activities pursuant to Stage 3
- an outline of the recommended manufacturing Process including an estimate of the expected yield of Product at the chosen production scale

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

- a preliminary estimate of the **[*]** that might be achieved across the Process

3.3 Timescale

Stage 3 can commence once **[*]** is available from Stage 1 of the Services. Stage 3 shall be complete with the issue of the report of activities and it is estimated that this report will be issued **[*]** from the start of Stage 3.

4.0 Stage 4—cGMP Documentation

4.1 Objective

To prepare cGMP documentation for use in manufacture of Product for clinical trials.

4.2 Activities

4.2.1 Prepare documentation approved by LB's quality services department.
The documentation shall cover:

— Manufacturing Directions for **[*]** Processes including in-Process controls.

— Raw material specifications (as required).

— Sampling protocols.

— Final Product specification.

4.3 Timescale

Stage 4 shall be complete on notification by LB to the Customer that the documentation has been approved by LB's quality services department. It is estimated that Stage 4 will take **[*]** from commencement, Stage 4 will be scheduled in to the overall programme in such a way that it is not rate limiting.

5.0 Stage 5—Development Pilot Batch

5.1 Objectives

5.1.1 To carry out a **[*]** at **[*]** (not to GMP).

5.1.2 To evaluate the ability of the Process to produce Product meeting the purity limits included in the draft Specification.

5.1.3 To produce bulk purified non GMP Product that the Customer could use for **[*]**. Depending on the testing results on the Product the Customer may consider the Product suitable for **[*]**.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

5.2 Activities

5.2.1 Recover **[*]** from the MCB or WCB (Stage 2) and **[*]**. Carry out **[*]**.

5.2.2 **[*]** and **[*]**. Refine the key operational parameters of this **[*]** in the Process.

5.2.3 **[*]** by procedure established during Stage 3.

5.2.4 Test Product **[*]**. The **[*]** will also be carried out on this **[*]**.

5.2.5 Review requirements (if any) for Process modifications that may be needed following this study before Stage 6. Any such Process modifications are subject to agreement.

5.2.6 Lay down a **[*]**, plus container type, to be agreed between LB and the Customer.

5.2.7 Deliver **[*]** Product to the Customer.

5.3 Timescale

Stage 5 shall be complete upon delivery of Product from the pilot batch. It is estimated that Product will be delivered **[*]** from commencement of Stage 5.

6.0 Stage 6—Production of cGMP Material

Note: *This first batch of cGMP material to be made at LB will* **[*]** *batch*

6.1 Objectives

6.1.1 To manufacture Product at **[*]** in accordance with the principles of Good Manufacturing Practice (cGMP).

6.1.2 To further evaluate the ability of the Process to produce Product meeting the draft Specification.

6.2 Activities

6.2.1 After receiving adequate **[*]** on the PSS and sterility, **[*]** on the MCB and WCB (Stage 2), **[*]** from the WCB and **[*]**.

6.2.2 Carry out **[*]** scale.

6.2.3 Remove **[*]** and **[*]** an end of production cell bank (EPC).

6.2.4 **[*]** and **[*]** as specified in Stage 5.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

6.2.5 **[*]** by procedure established during Stage 3.

6.2.6 Test Product against the draft Specification.

6.2.7 Review requirements (if any) for Process modifications in order to meet the Specification for manufacture of subsequent lots.

6.2.8 Deliver Product to the Customer.

6.2.9 Undertake quality assurance review of lot documentation.

6.3 Timescale

Stage 6 shall be complete upon completion of quality assurance review (6.2.9), it is estimated that this will be **[*]** from commencement of Stage 6. Product could be delivered in **[*]** at approximately **[*]** from commencement.

7.0 Stage 7—Manufacturing and Control Data Packages

7.1 Objectives

To prepare data packages covering the Services performed at LB for submission to the appropriate regulatory authorities as required by the Customer.

7.2 Activities

7.2.1 Prepare data packages as required by the Customer, possibly for the purposes of submission as a Type II Drug Master File in the USA and/or for the purposes of submission in a clinical trial application in Europe. Exact **[*]** to be agreed with the Customer as the Services progress.

The data packages will cover:

— Adaptation of the Cell Line

— Preparation of cell banks and cell bank characterisation

— Production and QC methods.

— Lot release procedures. Lot data.

— Virus clearance validation

— Appropriate references to LB validation studies.

7.2.2 Issue data packages to the Customer or to the regulatory authorities as appropriate.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

7.3 Timescale

Stage 7 shall be complete with the issue of the data packages. The time required for completion of Stage 7 depends on the scope of work, to be agreed with the Customer.

8.0 Stage 8—Evaluation of **[*]** Clearance

8.1 Objectives

8.1.1 To obtain data for **[*]** by the **[*]** used in the **[*]** of bulk Product.

8.2 Activities

8.2.1 Design a scaled down Process for each **[*]**. The scaled down Process will mimic as closely as reasonably possible the manufacturing scale Process.

8.2.2 Prepare a GLP study protocol.

8.2.3 Collect column load samples from the appropriate steps of the full scale manufacturing Process during Stage 6 of the Services.

8.2.4 Carry out the scaled down Process for each of the **[*]**. Compare the **[*]** with the full scale manufacturing Process. This is designed to demonstrate that the scaled down Process does mimic the manufacturing Process and to generate control samples to test for **[*]**.

8.2.5 Repeat the scaled down Process for each column step, each spiked separately with **[*]**. The **[*]** will be prepared and assayed by a suitable Testing Laboratory. The column **[*]** will be carried out by LB staff working in the laboratories of the Testing Laboratory.

8.2.6 Assay **[*]** in Product containing fractions (to allow calculation of clearance factors) and in selected unbound and wash fractions to determine (where possible) where **[*]** and hence identify critical steps in the Process.

8.2.7 Measure the extent of **[*]** and rate of **[*]**.

8.2.8 Calculate **[*]** for each step by **[*]** applied by that **[*]**.

8.2.9 Issue a report of activities to the Customer.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

8.3 Timescale

Stage 8 shall commence once Product samples are obtained from Stage 6. It is estimated that Stage 8 shall be complete **[*]** from commencement.

9.0 Stage 9—Validation of Bulk Product bottling and shipping in **[*]** volumes

9.1 Objectives

9.1.1 To simulate in Lonza's GMP facility a fill of final bulk Product into **[*]** bottles with **[*]** to provide SOPs and validation for this procedure.

9.1.2 To validate shipping of final bulk product in **[*]**.

9.2 Activities

9.2.1 Simulate in Lonza's GMP facility a fill of final bulk Product into **[*]** bottles with shrink sealage.

9.2.2 Prepare appropriate SOPs for the final fill of bulk Product into **[*]**.

9.2.3 Simulate a shipment of final bulk Product in **[*]** bottles in packaging designed to maintain temperature at **[*]**.

9.3 Timescale

9.3.1 Lonza will schedule the activities under Stage 9 to be complete prior to final fill of bulk Product in Stage 6. It is estimated that these activities will take **[*]** to complete.

10.0 Stage 10—Pre-Formulation Study

10.1 Objectives

10.1.1 To monitor Product stability in a range of buffers under conditions of temperature stress as a means of selecting working formulations that confer suitable short term stability and recommending candidates for longer stability trials to evaluate as a final bulk formulation buffer.

10.2 Activities

10.2.1 **[*]** Product by **[*]** prepared during **[*]**, or alternatively, use a sample of **[*]** Product made available under **[*]**.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Adjust to an appropriate concentration to be agreed with the Customer.

Note: *Concentration should be +/-***[*]** *of the concentration that is anticipated to be used in the final formulation.*

10.2.2 **[*]** of Product into a maximum of **[*]** formulations.

Note: Choice of formulations to be agreed with the Customer before commencement and **[*]**.

Incubate samples at **[*]** for up to **[*]**. Selected **[*]** will take place.

Retention samples of unprocessed material will be kept at **[*]** for reference purposes.

10.2.3 Send samples at each time point to the Customer for evaluation of **[*]** (if appropriate).

10.2.4 Analyse samples at **[*]** by the following analytical methods (not all **[*]** will be evaluated at each timepoint):

Appearance: visual check for **[*]**

[*]: integrity

[*]: integrity

[*]: aggregates

[*]: **[*]**

10.2.5 Customer to supply LB with information on **[*]** of the Product assay results, as measured by the Customer, on samples supplied under activity 10.2.3.

Results to be included in the report to be produced under activity 10.2.6, if available.

10.2.6 Issue a report of the activities to the Customer. Make a recommendation on formulations which are suitable as short-term working formulations and which could be evaluated in longer stability studies.

10.3 Timescale

Stage 10 shall commence once samples are available from Stage 1.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Stage 10 shall be complete upon issue of the report of activities. It is estimated that this report shall be issued **[*]** from commencement of Stage 10.

11.0 Stage 11—Bulk Product Stability Studies

11.1 Objectives

11.1.1 To monitor Product stability in the selected (and, if requested by the Customer, one back-up alternative formulation) for an extended period.

11.1.2 To advise whether the formulations evaluated are suitable for long term use with the Product.

11.2 Activities

11.2.1 Agree scope of the study with the Customer: e.g. number of **[*]** to be performed at each time point, whether a back-up formulation is also to be looked at.

11.2.2 Take samples of bulk purified Product from batches to be agreed with the Customer, for example the **[*]** and/or the **[*]**. Samples will be of an appropriate volume to allow analysis of all the parameters to be measured in the study. Separate samples will be taken for each time point to be investigated. Samples will be stored in containers representative of the containers used for Product.

11.2.3 Incubate samples at **[*]** as required. Retention samples stored at **[*]** will be used for reference purposes.

Note: *It is recommended that additional samples be stored at* **[*]** *to allow extension of the Study if required and agreed between LB and the Customer. Sufficient samples will be stored to allow for assessment of* **[*]** *at the termination of each study condition.*

11.2.4 At each time point send samples to the Customer for measurement of activity. Customer to supply results to LB for the final report.

11.2.5 At each time point analyse samples at LB using the following analytical methods:

Appearance:	visual check for **[*]**
[*]	Product integrity
[*]:	aggregates

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

[*]: protein concentration
[*] particulates

Other assays may be added after agreement between LB and the Customer.

11.2.6 Issue a report to the Customer after completion of the study. Interim reports will also be provided as agreed between the Customer and LB. A summary of the results will be provided following each timepoint. Make a recommendation on the suitability of the formulation(s) tested for long term use with the Product.

11.3 Timescale

Stage 11 shall commence once samples are available.

Stage 11 shall be complete upon issue of the report of activities, the report will be issued at the end of the study. Duration of the study is to be agreed between LB and the Customer.

12.0 Stage 12—Reference Standard Characterisation and Product Equivalence Studies

12.1 Objectives

12.1.1 To analyse reference standards of Product made at LB using a number of analytical methods in addition to those used to test Product against the Specification.

12.1.2 To compare the reference standard of Product made at LB with Product made by the Customer in a **[*]** analysis.

12.2 Activities

12.2.1 Lay down a reference standard from Product produced under **[*]** and/or **[*]** of the Services. Store reference standards at **[*]**. Numbers and volumes of reference standard **[*]**, plus container type to be agreed between LB and the Customer. Receive one reference standard from the Customer of Product made by the Customer.

12.2.2 Analyse reference standards in the following analytical assays:

[*]
[*]
[*]
[*]
[*]

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

12.2.3 The Customer or LB will assay the reference standards for **[*]**.

12.2.4 Issue a report to the Customer of the results obtained and including where appropriate the tests carried out against the draft Specification.

Provide an assessment of whether these results are as expected for this Product. A description of any key differences between the reference standards will be provided (if applicable).

12.2.5 Make a recommendation in the report for any additional studies that might be required.

12.3 Timescale

Stage 12 can commence once the reference standards are available. Stage 12 will be complete upon issue of the report and it is estimated that this will be issued **[*]** from commencement of Stage 12.

13.0 Stage 13—Evaluation of LB's **[*]** with Product

13.1 Objectives

13.1.l To evaluate LB's **[*]** and assess their suitability for testing of bulk purified Product.

13.2 Activities

13.2.l Test Product samples in LB's **[*]** using a selection of **[*]**.

13.2.2 Assess if LB's **[*]** in testing bulk Product for clinical trials.

13.2.3 Provide a recommendation on whether further work is needed to develop a **[*]** suitable for testing of bulk Product for clinical trials.

13.3 Timescale

It is estimated that Stage 13 will take **[*]** to complete. This Stage will be scheduled to commence as soon as representative purified Product samples are available from other Stages in the Services.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE 3

PRICE AND TERMS OF PAYMENT

1.0 Price

In consideration for LB carrying out the Services as detailed in Schedule 2 the Customer shall pay LB, as follows

Stage		Price (UK £ sterling)	
1	Cell Line Evaluation	£	105,000
2	Master and Working Cell Banks	£	64,000(1)
3	Purification Process Development	£	73,500
4	GMP Documentation	£	26,250
5	Development Pilot Batch	£	79,000
6	Production of GMP Material at [*]	£	295,000(2)
7	Manufacturing and Control Data Packages	£	17,000(3)
8	Evaluation of [*]	£	40,000(4)
9	Validation of Bulk Product bottling and shipping in [*] volumes	£	30,000
10	Preformulation Study	£	57,750
11	Bulk Product Stability Studies	£	12,500 per time point
12	Reference Standard Characterisation	£	50,000
13	Evaluation of [*] with Product	£	7,000

Notes:

(1) This Price includes only cell bank testing as specified in **[*]**. Additional testing will be required (see 2.3) prior to entry into human clinical trials, and is subject to separate agreement.

(2) This Price does not include **[*]** of the EPC, laid down in **[*]**.

(3) Price for additional regulatory work to be agreed with the Customer depending on the scope of work. LB's pricing of regulatory work is based on a man-day rate of **[*]**.

(4) Plus Testing Laboratory charges at price invoiced to LB (estimated to be approximately **[*]**).

2.0 Payment

Payment by the Customer of the Price for each Stage shall be made against LB invoices on the following basis:

For all Stages apart from Stage 6 and 11, **[*]** of the Price for each Stage on commencement of that Stage, and **[*]** on completion of that Stage.

For Stage 6 **[*]** on completion of the Stage.

For Stage 11 a payment schedule will be agreed between LB and the Customer to allow for interim payments to be made to LB as the Studies progresses.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SCHEDULE 4

SPECIAL TERMS

At the request of Customer LB and Customer will negotiate in good faith a technology transfer agreement on terms consistent with LB’s terms of business in operation at that time.

SCHEDULE 5

TERMS FOR CONTRACT SERVICES FOR **[*]**
FOR XCYTE THERAPIES, INC.

1. Interpretation

1.1 In these Standard Terms, unless the context requires otherwise:

1.1.1 "Affiliate" means any Company, partnership or other entity which directly or indirectly controls, is controlled by or is under common control with the relevant party to this Agreement. "Control" means the ownership of more than fifty per cent (50%) of the issued share capital or the legal power to direct or cause the direction of the general management and policies of the party in question.

1.1.2 "Agreement" means any contract between LB and a Customer incorporating these Standard Terms.

1.1.3 "Cell Line" means the cell line, particulars of which are set out in Schedule 1.

1.1.4 "cGMP" means Good Manufacturing Practices and General Biologics Products Standards as promulgated under the US Federal Food Drug and Cosmetic Act at 21CFR (Chapters 210, 211, 600 and 610) and the Guide to Good Manufacturing Practices for Medicinal Products as promulgated under European Directive 91/356/EEC. LB's operational quality standards are defined in internal GMP policy documents. Additional product-specific development documentation and validation work may be required to support regulatory applications to conduct clinical trials or market a product.

1.1.5 "Customer" includes any person to whom a Proposal is issued by LB.

1.1.6 "Customer information" means all technical and other information not known to LB or in the public domain relating to the Cell Line, the Process and the Product, from time to time supplied by the Customer to LB.

1.1.7 "Customer Materials" means the Materials supplied by Customer to LB (if any) and identified as such by Schedule 1 hereto.

1.1.8 "Customer Tests" means the tests to be carried out on the Product immediately following receipt of the Product by the Customer, particulars of which are set out in Schedule 1.

1.1.9 "ex works" means LB has fulfilled its obligation to deliver when it has made the object of delivery available at its premises to the Customer or the Customer's agent (or to LB's carrier if the provisions of Clause 5.1 of this Schedule 5 apply). For the avoidance of doubt, unless otherwise agreed in writing, LB is not responsible for loading the object of delivery on to the vehicle provided by the Customer or the Customers agent (or to LB's nominated carrier if Clause 5.1 of this Schedule 5 applies) or for delaying the object of delivery for export.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

1.1.10 “LB Know-How” means all technical and other information relating to the Process known to LB from time to time other than confidential Customer Information and information in the public domain.

1.1.11 “Patent Rights” means all patents and patent applications of any kind throughout the world relating to the Process which from time to time LB is the owner of or is entitled to use but not in any case any patent rights owned or controlled by Customer or its licensor/supplier.

1.1.12 “Price” means the price specified in Schedule 3 for the Services.

1.1.13 “Process” means the process for the production of the Product from the Cell Line, including any improvements thereto from time to time.

1.1.14 “Product” means all or any part of the product (including any sample thereof), particulars of which are set out in Schedule 1.

1.1.15 “Proposal” means any proposal or quotation issued by LB.

1.1.16 “Services” means all or any part of the services the subject of the Agreement or Proposal (including, without limitation, cell culture evaluation, purification evaluation, master, working and extended cell bank creation, and sample and bulk production), particulars of which are set-out in Schedule 2.

1.1.17 “Special Term” means any term additional or supplemental to these Standard Terms from time to time agreed in writing between LB and the Customer. Particulars of any Special Terms at the date of the Agreement are set out in Schedule 4.

1.1.18 “Specification” means the specification for Product, particulars of which are set out In Schedule 1.

1.1.19 “Terms of Payment” means the terms of payment specified in Schedule 3.

1.1.20 “Testing Laboratories” means any third party instructed by LB to carry out tests on the Cell Line or the Product.

1.2 Unless the context requires otherwise, words and phrases defined in any other part of the Agreement shall bear the same meanings in these Standard Terms, references to the singular number include the plural and vice versa, references to Schedules are references to schedules to the Agreement, and references to Clauses are references to clauses of these Standard Terms.

1.3 In the event of a conflict between a Special Term and these Standard Terms, the Special Term shall prevail.

2. Applicability of Standard Terms

2.1 Unless agreed otherwise, these Standard Terms shall apply to every Proposal and Agreement, and to any services additional to the Services requested by a Customer. LB shall not be bound by any terms which may be inconsistent with these Standard Terms and the Special Terms. No variation of or addition to these Standard Terms and the Special Terms or any other term of an Agreement shall be effective unless in writing and signed for and on behalf of LB and Customer. For the avoidance of doubt, amendments to the draft Specification or Specification for Product shall be effective if reduced to writing and signed by the regulatory

representative of both Parties, which regulatory representative shall be nominated from time to time by the parties.

2.2 Unless previously withdrawn, a Proposal is open for acceptance within the period stated therein. Where no period is stated, the Proposal shall be open for acceptance within thirty (30) days from the date it is issued unless withdrawn in the meantime. Any acceptance by a Customer of a Proposal shall not create a binding contract.

2.3 A binding contract shall only be created when LB has accepted in writing an offer placed by a Customer.

3. Supply by Customer

3.1 Prior to or immediately following the date of the Agreement the Customer shall supply to LB the Customer Information, together with full details of any hazards relating to the Cell Line and/or the Customer Materials, their storage and use. On review of this Customer Information, the Cell Line and/or the Customer Materials shall be provided to LB at LB's request. Property in the Cell Line and/or the Customer Materials supplied to LB shall remain vested in the Customer.

3.2 The Customer hereby grants LB the non-exclusive right to use the Cell Line, the Customer Materials and the Customer Information for the purpose of the Agreement. LB hereby undertakes not to use the Cell Line, the Customer Materials or the Customer Information (or any part thereof) for any other purpose.

3.3 LB shall:

3.3.1 at all times use all reasonable endeavours to keep the Cell Line and/or the Customer Materials secure and safe from loss and damage in such manner as LB stores its own material of similar nature;

3.3.2 not part with possession of the Cell Line and/or the Customer Materials or the Product, save for the purpose of tests at the Testing Laboratories; and

3.3.3 procure that all Testing Laboratories are subject to obligations of confidence and restrictions to use and transfer substantially in the form of those obligations of confidence imposed on LB under these Standard Terms.

3.4 The Customer warrants to LB that:

3.4.1 the Customer is and shall at all times throughout the duration of the Agreement remain entitled to supply the Cell Line, the Customer Materials and Customer Information to LB;

3.4.2 to the best of the Customer's knowledge and belief the use by LB of the Cell Line, the Customer Materials or and the Customer Information for the Services will not infringe any rights (including, without limitation, any intellectual or industrial property rights) vested in any third party; and

3.4.3 the Customer will notify LB, in writing, immediately it knows or ought to know that it is no longer entitled to supply the Cell Line, the Customer Materials and/or the Customer Information to LB or that the use by LB of the Cell Line, the Customer Materials or the Customer Information for the Services infringes or is alleged to infringe any rights (including, without limitation, any intellectual or industrial property rights) vested in any third party.

3.5 Provided that LB gives Customer prompt written notice and full particulars of any claim, tenders to Customer, full control of any defense or settlement and co-operates fully with Customer, the Customer undertakes to indemnify and to maintain LB promptly indemnified against any loss, damage, costs and expenses of any nature (including court costs and legal fees on a full indemnity basis), whether direct or consequential, and whether or not foreseeable or in the contemplation of LB or the Customer, that LB may suffer arising out of or incidental to any breach of the warranties given by the Customer under Clause 3.4 above or any claims alleging LB's use of the Cell Line, the Customer Materials or the Customer Information infringes any rights (including, without limitation, any intellectual or industrial property rights) vested in any third party (whether or not the Customer knows or ought to have known about the same), however it is agreed that LB will retain its own independent legal counsel with settlement of any claim requiring LB's prior written consent which shall not be unreasonably withheld.

3.6 The obligations of LB and the Customer under this Clause 3 shall survive the termination for whatever reason of the Agreement.

4. Provision of the Services

4.1 LB shall diligently carry out the Services as provided in Schedule 2 and shall use all reasonable efforts to achieve the estimated timescales therefor.

4.2 Due to the unpredictable nature of the biological processes involved in the Services, the timescales set down for the performance of the Services (including without limitation the dates for production and delivery of Product) and the quantities of Product for delivery set out in Schedule 2 are estimated only.

4.3 Provided that LB has complied with Section 4.1 the Customer shall not be entitled to cancel any unfulfilled part of the Services or to refuse to accept the Services on grounds of late performance, late delivery or failure to produce the estimated quantities of Product for delivery. LB shall not be liable for any loss, damage, costs or expenses of any nature, whether direct or consequential, occasioned by:

4.3.1 any delay in performance or delivery howsoever caused; or

4.3.2 any failure to produce the estimated quantities of Product for delivery.

4.4 LB shall comply with the regulatory requirements from time to applicable to the Services as set out in Schedule 2 hereto, including without limitation all relevant requirements of current Good Manufacturing Practices under the policies and practices of the US FDA and European Regulatory Authorities and shall consider ICH and other relevant regulatory guidance documents whether or not set forth with precision in said Schedule 2. If the Customer requests LB to comply with any other regulatory or similar legislative requirements LB shall use all reasonable commercial endeavours to do so provided that:

4.4.1 the Customer shall be responsible for informing LB in writing of the precise foreign requirements which the Customer is requesting LB to observe;

4.4.2 such foreign requirements do not conflict with any mandatory requirements under the laws of England;

4.4.3 LB shall be under no obligation to ensure that such written information complies with the applicable requirements of any foreign jurisdiction; and

4.4.4 all costs and expenses incurred by LB in complying with such foreign requirements shall be charged to the Customer in addition to the Price.

4.5 Delivery of Product shall be ex-works LB's premises (Incoterms 1990). Risk in and title to Product shall pass on delivery. Transportation of Product, whether or not under any arrangements made by LB on behalf of the Customer, shall be made at the sole risk and expense of the Customer.

4.6 Unless otherwise agreed, LB shall package and label Product for delivery ex-works in accordance with its standard operating procedures. It shall be the responsibility of the Customer to inform LB in writing in advance of any special packaging and labelling requirements for Product. All additional costs and expenses of whatever nature incurred by LB in complying with such special requirements shall be charged to the Customer in addition to the Price.

5. Transportation of Product and Customer Tests

5.1 If requested by the Customer, LB will (acting as agent of the Customer for such purpose) arrange the transportation of Product from LB's premises to the destination indicated by the Customer together with insurance cover for Product in transit at its invoiced value. All additional costs and expenses of whatever nature incurred by LB in arranging such transportation and insurance shall be charged to the Customer in addition to the Price.

5.2 Where LB has made arrangements for the transportation of Product, the Customer shall diligently examine the Product as soon as practicable after receipt. Notice of all claims (time being of the essence) arising out of:

5.2.1 damage to or total or partial loss of Product in transit shall be given in writing to LB and the carrier within three (3) working days of delivery; or

5.2.2 non-delivery shall be given in writing to LB within ten (10) days after the date of LB's dispatch notice.

5.3 The Customer shall make damaged Product available for inspection and shall comply with the requirements of any insurance policy covering the Product notified by LB to the Customer. LB shall offer the Customer all reasonable assistance (at the cost and expense of the Customer) in pursuing any claims arising out of the transportation of Product.

5.4 Promptly following receipt of Product or any sample thereof, the Customer shall carry out the Customer Tests. PROVIDED ALWAYS the Specification for such Product is not stated to be in draft form, if the Customer Tests show that the Product fails to meet Specification, the Customer shall give LB written notice thereof within forty-five (45) days from the date of delivery of the Product ex-works and shall return such Product to LB's premises for further testing. In the absence of such written notice Product shall be deemed to have been accepted by the Customer as meeting Specification. If LB is satisfied that Product returned to LB fails to meet Specification and that such failure is not due (in whole or in part) to acts or omissions of the Customer or any third party after delivery of such Product ex-works, LB shall at Customer's discretion refund that part of the Price

that relates to the production of such Product or replace such Product at its own cost and expense. In the event Customer requires LB to replace such Product, LB shall be entitled to have regard to its commercial commitments to third parties in the timing of such replacement and will consider Customer's requirements in as fair and equal manner as it considers other third party customer requirements, Customer acknowledges that there may, therefore, be a delay in the timing of the replacement of such Product.

FOR THE AVOIDANCE OF DOUBT, WHERE THE SPECIFICATION IS STATED TO BE IN DRAFT FORM LB SHALL BE OBLIGED ONLY TO USE ITS REASONABLE ENDEAVOURS TO PRODUCE PRODUCT THAT MEETS SPECIFICATION.

5.5 If there is any dispute concerning whether Product returned to LB, fails to meet Specification or whether such failure is due (in whole or in part) to acts or omissions of the Customer or any third party after delivery of such Product ex-works, such dispute shall be referred for decision to an independent expert (acting as an expert and not as an arbitrator) to be appointed by agreement between LB and the Customer or, in the absence of agreement by the President for the time being of the Association of the British Pharmaceutical Industry. The costs of such independent expert shall be borne equally between LB and the Customer. The decision of such independent expert shall be in writing and, save for manifest error on the face of the decision, shall be binding on both LB and the Customer.

5.6 The provisions of Clauses 5.4 and 5.5 shall be the sole remedy available to the Customer in respect of Product that fails to meet Specification.

6. Price and Terms of Payment

6.1 The Customer shall pay the Price in accordance with the Terms of Payment.

6.2 Unless otherwise indicated in writing by LB. all prices and charges are exclusive of Value Added Tax or of any other applicable taxes, levies, imposts, duties and fees of whatever nature imposed by or under the authority of any government or public authority, which shall be paid by the Customer (other than taxes on LB's income). All Invoices are strictly net and payment must be made within thirty (30) days of date of invoice. Payment shall be made without deduction, deferment, set-off, lien or counterclaim of any nature.

6.3 In default of payment on due date:

6.3.1 interest shall accrue on any amount overdue at the rate of **[*]** above the base lending rate from time to time of HSBC Bank plc, interest to accrue on a day to day basis both before and after judgement; and

6.3.2 LB shall, at its sole discretion, and without prejudice to any other of its accrued rights, be entitled to suspend the provision of the Services or to treat the Agreement as repudiated by notice in writing to the Customer exercised at any time thereafter.

7. Warranty and Limitation of Liability

7.1 LB warrants that:

7.1.1 the Services shall be performed in accordance with Clause 4.1; and

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

7.1.2 the Product shall meet Specification on delivery, save where the Specification is stated to be in draft form when LB shall be obliged only to use its reasonable endeavours to produce Product that meets Specification.

7.2 Clause 7.1 is in lieu of all conditions, warranties and statements in respect of the Services and/or the Product whether expressed or implied by statute, custom of the trade or otherwise (including but without limitation any such condition, warranty or statement relating to the description or quality of the Product, its fitness for a particular purpose or use under any conditions whether or not known to LB) and any such condition, warranty or statement is hereby excluded.

7.3 Without prejudice to the terms of Clauses 5.6, 7.1. 7.2, 7.4 and 7.6, the liability of LB for any loss or damage suffered by the Customer as a direct result of any breach of the Agreement or of any other liability of LB (including misrepresentation and negligence or third party claim brought against Customer relating solely to LB know-how) in respect of the Services (including without limitation the production and/or supply of the Product) shall be limited to the payment by LB of damages which shall not exceed pounds sterling nine hundred and nineteen thousand and five hundred (£919,500).

7.4 Subject to Clause 7.6, LB shall not be liable for the following loss or damage howsoever caused (even if foreseeable or in the contemplation of LB or the Customer):

7.4.1 loss of profits, business or revenue whether suffered by the Customer or any other person; or

7.4.2 special, indirect or consequential loss, whether suffered by the Customer or any other person; and

7.4.3 any loss arising from any claim made against the Customer by any other person.

7.5 Provided that LB gives Customer prompt written notice and full particulars of any claim, tenders to Customer, full control of any defense or settlement, and co-operate fully with Customer, the Customer shall indemnify and maintain LB promptly indemnified against all claims, actions, costs, expenses of any nature (including court costs and legal fees on a full indemnity basis) or other liabilities whatsoever in respect of the following, it been agreed, however that LB will retain its own independent legal counsel with settlement of any claim requiring LB’s prior written consent which will not be unreasonably withheld:

7.5.1 any liability under the Consumer Protection Act 1987, unless such liability is caused by the negligent act or omission of LB in the production and/or supply of the Product; and

7.5.2 any product liability (other than that referred to in Clause 7.5.1) in respect of Product, unless such liability is caused by the negligent act or omission of LB in the production and/or supply of Product; and

7.5.3 any negligent or willful act or omission of the Customer in relation to the use, processing, storage or sale of the Product.

7.6 Nothing contained in these Standard Terms shall purport to exclude or restrict any liability for death or personal injury resulting directly from negligence by LB in

carrying out the Services or any liability for breach of the implied undertakings of LB as to title.

7.7 The obligations of LB and the Customer under this Clause 7 shall survive the termination for whatever reason of the Agreement.

8. Customer Information, LB Know-How and Patent Rights

8.1 The Customer acknowledges that LB Know-How and LB acknowledges that Customer Information with which it is supplied by the other pursuant to the Agreement is supplied, subject to Clause 8.4, in circumstances imparting an obligation of confidence and each agrees to keep such LB Know-How or such Customer Information secret and confidential and to respect the other's proprietary rights therein and not at any time for any reason whatsoever to disclose or permit such LB Know-How or such Customer Information to be disclosed to any third party save as expressly provided herein.

8.2 The Customer and LB shall each procure that all their respective employees, consultants and contractors having access to confidential LB Know-How or confidential Customer Information shall be subject to the same obligations of confidence as the principals pursuant to Clause 8.1 and shall enter into secrecy agreements in support of such obligations. Insofar as this is not reasonably practicable, the principals shall take all reasonable steps to ensure that any such employees, consultants and contractors are made aware of such obligations.

8.3 LB and the Customer each undertake not to disclose or permit to be disclosed to any third party, or otherwise make use of or permit to be made use of, any trade secrets or confidential information relating to the technology, business affairs or finances of the other, any subsidiary, holding company or subsidiary or any such holding company of the other, or of any suppliers, agents, distributors, licensees or other customers of the other which comes into its possession under this Agreement.

8.4 The obligations of confidence referred to in this Clause 8 shall not extend to any information which:

8.4.1 is or becomes generally available to the public otherwise than by reason of a breach by the recipient party of the provisions of this Clause 8;

8.4.2 is known to the recipient party and is at its free disposal prior to its receipt from the other;

8.4.3 is subsequently disclosed to the recipient party without being made subject to an obligation of confidence by a third party;

8.4.4 LB or the Customer may be required to disclose under any statutory, regulatory or similar legislative requirement, subject to the imposition of obligations of secrecy wherever possible in that relation; or

8.4.5 is developed by any servant or agent of the recipient party without access to or use or knowledge of the information by the disclosing party.

8.5 The Customer acknowledges that:

8.5.1 LB Know-How and the Patent Rights are vested in LB or LB is otherwise entitled thereto; and

8.5.2 the Customer shall not at any time have any right, title, license or interest in or to LB Know-How, the Patent Rights or any other intellectual property rights relating to the Process which are vested in LB or to which LB is otherwise entitled.

8.6 LB acknowledges that:

8.6.1 Customer has undertaken that the Customer Information is vested in the Customer or the Customer is otherwise entitled thereto; and

8.6.2 save as provided herein LB shall not at any time have any right, title, license or interest in or to the Customer information or any other Intellectual Property rights vested in Customer or to which the Customer is entitled.

8.7 The obligations of LB and the Customer under this Clause 8 shall survive the termination for whatever reason of the Agreement.

9. Termination

9.1 If it becomes apparent to either LB or the Customer at any stage in the provision of the Services that it will not be possible to complete the Services for scientific or technical reasons, a sixty (60) day period shall be allowed for discussion to resolve such problems. If such problems are not resolved within such period, LB and the Customer shall each have the right to terminate the Agreement forthwith by notice in writing. In the event of such termination, the Customer shall pay to LB a termination sum calculated by reference to all the Services performed by LB prior to such termination (including a pro rata proportion of the Price for any stage of the Services which is in process at the date of termination) and all expenses reasonably incurred by LB in giving effect to such termination, including the costs of terminating any commitments entered into under the Agreement, such termination sum not to exceed the balance of the Price for the remaining services not yet commenced, LB will engage in good faith efforts to offer to other third party customers those development resources or manufacturing slots which become available due to termination by Customer of this Agreement, and Customer will not be required to pay for that portion of the Services and related expenses that LB is able to charge to such other customers.

9.2 Customer shall be entitled to terminate this Agreement at any time for any reason by sixty (60) days' notice to LB in writing. In the event of Customer serving notice to terminate this Agreement which notice is expressed to be given pursuant to this Clause 9.2, Customer shall:

9.2.1 pay LB a termination sum calculated in accordance with the principles of Clause 9.1 above, and

9.2.2 In the event notice to terminate this Agreement pursuant to this Clause 9.2 is issued to LB within six (6) months of LB's then estimated start date for any stage of the Services which includes cGMP fermentation activities, Customer shall pay LB a sum (to the extent not already payable as noted above in accordance with the principles of Clause 9.1) equal to not less than ten percent (10%) nor more than eighty-five percent (85%) of the full Price of that stage, or those stages, in question, as provided in Clause 9.2.3

below. Such payment shall fall due to LB on or before the date of termination of the Services. For the avoidance of doubt activities relating to cGMP fermentation shall be deemed to commence with the date of removal of the vial of cells for the performance of the fermentation from frozen storage.

9.2.3 In the event of Customer serving notice to terminate this Agreement in the circumstances described in Clause 9.2.2, LB shall use reasonable endeavours to substitute a requirement for the manufacturing slot which becomes available due to Customer of the Agreement. If LB finds such an alternative third party selling the manufacturing slot, which third party requirement is not for business (i.e. LB shall not be required to reschedule parties), the fee payable by Customer under Clause 10% of the price for the manufacturing slot originally amount, if any, by which the fees to be paid for such customer is less than 85% of the price under this originally reserved for Customer. If LB is substitute a third party requirement for the such manner, Customer shall be liable to of the price under this Agreement third party termination by and is successful in previously contracted existing commitments to third parties), the fee payable by Customer under Clause 9.2.2 shall equal the greater of (a) reserved for Customer and (b) the manufacturing slot by such other Agreement for the manufacturing slot unable, by using reasonable endeavours, to manufacturing slot reserved for Customer in pay LB under Clause 9.2.2 a sum equal to 85% for the manufacturing slot.

9.3 LB and the Customer may each terminate the Agreement forthwith by notice in writing to the other upon the occurrence of any of the following events:

9.3.1 if the other commits a breach of the Agreement which (in the case of a breach capable of remedy) is not remedied within thirty (30) days of the receipt by the other of notice identifying the breach and requiring its remedy; or

9.3.2 if the other ceases for any reason to carry on business or compounds with or convenes a meeting of its creditors or has a receiver or manager appointed in respect of all or any part of its assets or is the subject of an application for an administration order or of any proposal for a voluntary arrangement or enters into liquidation (whether compulsorily or voluntarily) or undergoes any analogous act or proceedings under foreign law.

9.4 Upon the termination of the Agreement for whatever reason:

9.4.1 LB shall promptly return all Customer Information to the Customer and shall dispose of or return to the Customer the Customer Materials (and where supplied by Customer the Cell Line) and any materials therefrom, as directed by the Customer;

9.4.2 the Customer shall promptly return to LB all LB Know-How it has received from LB;

9.4.3 the Customer shall not thereafter use or exploit the Patent Rights or the LB Know-How in any way whatsoever;

9.4.4 LB may thereafter use or exploit the Patent Rights or the LB Know-How in any way whatsoever without restriction; and

9.4.5 LB and the Customer shall do all such acts and things and shall sign and execute all such deeds and documents as the other may reasonably require to evidence compliance with this Clause 9.4.

9.5 Termination of the Agreement for whatever reason shall not affect the accrued rights of either LB or the Customer arising under or out of this Agreement and all provisions which are expressed to survive the Agreement shall remain in full force and effect.

10. Force Majeure

10.1 If LB is prevented or delayed in the performance of any of its obligations under the Agreement by Force Majeure and shall give written notice thereof to the Customer specifying the matters constituting Force Majeure together with such evidence as LB reasonably can give and specifying the period for which it is estimated that such prevention or delay will continue, LB shall be excused from the performance or the punctual performance of such obligations as the case may be from the date of such notice for so long as such cause of prevention or delay shall continue.

10.2 The expression “Force Majeure” shall be deemed to include any cause affecting the performance by LB of the Agreement arising from or attributable to acts, events, acts of God, omissions or accidents beyond the reasonable control of LB.

11. Governing Law, Jurisdiction and Enforceability

11.1 The construction, validity and performance of the Agreement shall be governed by the laws of England, to the jurisdiction of whose courts LB and the Customer submit.

11.2 No failure or delay on the part of either LB or the Customer to exercise or enforce any rights conferred on it by the Agreement shall be construed or operate as a waiver thereof nor shall any single or partial exercise of any right, power or privilege or further exercise thereof operate so as to bar the exercise or enforcement thereof at any time or times thereafter.

11.3 The illegality or invalidity of any provision (or any part thereof) of the Agreement or these Standard Terms shall not affect the legality, validity or enforceability of the remainder of its provisions or the other parts of such provision as the case may be.

12. Miscellaneous

12.1 Neither party shall be entitled to assign, transfer, charge or in any way make over the benefit and/or the burden of this Agreement without the prior written consent of the other which consent shall not be unreasonably withheld or delayed, save that either LB or the Customer shall respectively be entitled without the prior written consent of the other to assign, transfer, charge, sub-contract, deal with or in any other manner make over the benefit and/or burden of this Agreement to an

Affiliate or to any 50/50 joint venture company of which either party is the beneficial owner or fifty per cent (50%) of the issued share capital thereof or to any company with which either party may merge or to any company to which that party may transfer its assets and undertakings.

12.2 The text of any press release or other communication to be published by or in the media concerning the subject matter of the Agreement shall require the prior written approval of LB and the Customer.

12.3 The Agreement embodies the entire understanding of LB and the Customer and there are no promises, terms, conditions or obligations, oral or written, expressed on implied, other than those contained in the Agreement. The terms of the Agreement shall supersede all previous agreements (if any) which may exist or have existed between LB and the Customer relating to the Services.

Exhibit 10.47

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [*]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

COLLABORATION AGREEMENT

This Agreement is entered into as of November 14, 2003, by and between:

ð **XCYTE THERAPIES, INC**., a Delaware corporation, having its principal place of business at 1124 Columbia Street, Suite 130, Seattle, WA 98104 (hereinafter referred to as "XCYTE").

and:

ð **FRESENIUS BIOTECH GmbH**, a company formed under the laws of Germany and a wholly-owned subsidiary of FRESENIUS AG, having its principal place of business at Else-Kröner-Straße 1, 61352 Bad Homburg v. d. H., Germany (hereinafter referred to as "FRESENIUS").

WITNESSETH

WHEREAS, XCYTE owns or controls intellectual property rights relating to certain technology known as the Xcellerate™ Technology;

WHEREAS, FRESENIUS is currently conducting research and development programs in the field of HIV retroviral gene therapy;

WHEREAS, FRESENIUS wishes to acquire from XCYTE rights to use the Xcellerate™ Technology in the Field under XCYTE's patent rights and know-how related to the Xcellerate™ Technology in the Field; and

WHEREAS, XCYTE is willing to grant to FRESENIUS such rights, subject to the terms of and conditioned upon this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and obligations set forth herein, the Parties hereto, intending to be legally bound, agree as follows:

ARTICLE I—DEFINITIONS AND INTERPRETATION

1.1. **Definitions**: For the purposes of this Agreement the following words and phrases shall have the following meanings:

"**Additional Pre-Pivotal Clinical Trial**" means any clinical trial in addition to the Phase I/II Clinical Trial, which is not a Pivotal Trial.

"**Affiliate**" means, with respect to a Party, any person, corporation or business entity that directly, or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with, a Party. For the purpose of this definition, control of a

corporation or of another business entity shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or the policies of the entity, whether through the ownership of voting securities, by agreement or otherwise.

"**Agreement**" means this agreement, all amendments and supplements to this Agreement and all schedules to this Agreement, including the following:

Exhibit A	—	XCYTE Patents
Exhibit B	—	Clinical Endpoints
Exhibit C	—	XCYTE In-License Agreements
Exhibit D	—	Specifications

"**Calendar Quarter**" means any of the three-month periods beginning January 1, April 1, July 1 and October 1 in any year.

"**Clinical Endpoints**" means the endpoints described in Exhibit B by which the parties will measure success of the Phase I/II Clinical Trial. Such Exhibit B shall be amended from time to time for any Additional Pre-Pivotal Clinical Trial and Pivotal Clinical Trial, as mutually agreed upon between the Parties.

"**Clinical Trials**" means Phase I/II Clinical Trial, any Additional Pre-Pivotal Clinical Trial, and a Pivotal Clinical Trial.

"**Completing**" or "**Completion**" means, with respect to the Clinical Trials, the date on which the last patient is evaluated and the resulting findings comply with the Clinical Endpoints.

"**Confidential Information**" has the meaning ascribed to it in Section 9.1. of this Agreement.

"**Controlled**" means with respect to any patent or other intellectual property right, entitlement to assign, or grant a license, sublicense or other right to or under such patent or right as provided for herein without violating the terms of any agreement with any Third Party.

"**Cost of Goods**" shall mean with respect to XCYTE™ Dynabeads® supplied to FRESENIUS (i) if by Third Parties the direct costs (including but not limited to labor and overhead expenses) invoiced to XCYTE for the manufacture and supply of XCYTE™ Dynabeads®; and (ii) if by XCYTE or its Affiliates, **[*]** of the direct cost (including but not limited to labor and overhead expenses) of providing such goods or services.

"**Effective Date**" means the date of this Agreement.

"**EUFETS**" shall have the meaning set forth in Section 2.1.

"**Events of Force Majeure**" shall have the meaning set forth in Article 17.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

"**Exclusive License**" has the meaning ascribed to it in Section 3.1.1. of this Agreement.

"**FDA**" means the United States Food and Drug Administration.

"**Field**" means any and all HIV retroviral gene therapy applications for human or animal use; provided that use of the technology sublicensed under the XCYTE In-Licenses shall be further limited to the "Field" defined in the respective XCYTE In-Licenses, as applicable.

"**Final Phase I/II Report**" means the final report of the results of the first Phase I/II Clinical Trial, including whether the Clinical Endpoints were achieved, delivered by FRESENIUS to XCYTE after Completion of such Phase I/II Clinical Trial.

"**First Commercial Sale**" means, in each country of the Territory, the first commercial sale, where sale means when delivered, billed out, or invoiced, whichever comes earlier, of a Product by FRESENIUS, its Affiliates or Sublicensees to a Third Party (other than a Sublicensee) following Regulatory Approval, if required, in the country in which the sale is to be made.

"**FRESENIUS Patents**" shall have the meaning set forth in Section 10.2.3.

"**cGMP**" shall mean current good manufacturing practices, as they relate to that part of manufacturing and quality assurance, which ensures that medicinal products are consistently produced and controlled to the quality standards appropriate to their intended use in each jurisdiction in the Territory in which Regulatory Approval has been obtained, including without limitation, the principles and guidelines specified in Chapter II of European Commission Directive 91/356/EEC, and the regulations set forth in Title 21 of the Code of Federal Regulations, Parts 210-211, 600-680, and 820 and the requirements thereunder imposed by the United States Food and Drug Administration ("FDA"). In case of conflict between the laws, the laws with the strictest interpretation shall control.

"**Improvements**" means all patentable or non-patentable inventions, discoveries, technology and information of any type whatsoever, including compositions, chemical compounds, biological materials, methods, processes, technical information, knowledge, experience and know-how which (i) are developed solely by XCYTE or jointly by XCYTE and FRESENIUS, (ii) utilize, incorporate, derive from, are based on or relate to the Xcellerate™ Technology or enhance the processes for manufacturing or using the Xcellerate™ Technology, and (iii) are useful in the Territory and in the Field.

"**Initiates**" or "**Initiation**" means, with respect to a human clinical trial, enrollment of the first patient into a trial pursuant to a clinical protocol of the specified clinical trial.

"**Net Sales**" means the gross amount invoiced by FRESENIUS, its Affiliates and Sublicensees for the sale or other disposition of Products to Third Parties (other than

Sublicensees), less the sum of the following deductions for amounts actually incurred related to said sale or other disposition:

(i) normal, customary trade discounts (including volume discounts), credits and allowances and adjustments for rejections, recalls and returns;

(ii) cost of freight and insurance, sales, use, excise, value added and similar taxes, surcharges, duties and other governmental charges (other than income tax) imposed on the sale and included in the gross amount charged to customers; and

(iii) normal, customary wholesaler chargebacks and rebates (including rebates to government agencies and government mandates and managed healthcare negotiated rebates).

"**Parties**" means FRESENIUS and XCYTE, and "Party" means any one of them.

"**Phase I/II Clinical Trial**" has the meaning provided in Section 2.1 hereof.

"**Pivotal Trial**" means a series of controlled, multi-center clinical trials, involving patients with the disease or condition of interest to obtain sufficient efficacy and safety data to support regulatory submissions and labeling for marketing of a candidate drug or other product.

"**Product**" means any and all products where the manufacture, sale or use of such products would (i) in the absence of the licenses granted in this Agreement infringe at least one Valid Patent Claim of the XCYTE Patents in the Territory, or (2) use the XCYTE Know-How.

"**Quality Standards**" has the meaning provided in Section 4.2.1 hereof.

"**Regulatory Approval**" means final regulatory approval in at least one country (including, where applicable, the first pricing approval in at least one country in the event that actual sales do not take place before such approval) required to market a Product for a disease or condition in accordance with the applicable laws and regulations of a given country in the Territory.

"**Research Program**" means the research program conducted pursuant to Article 2.

"**Research Program Term**" shall mean the term of the Research Program set forth in Section 2.3.

"**Royalty Term**" means, on a country-by-country basis, the period of time commencing on the Effective Date and continuing until the later of (i) the last to expire Valid Patent Claim included in the XCYTE Patents, or (ii) **[*]** years after the First Commercial Sale in a respective country. If FRESENIUS agrees to license in any New Technology, the Royalty Term shall extend until the later of (i) the last to expire Valid Patent Claim covering such New

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Technology, or (ii) **[*]** years after the First Commercial Sale of a Product derived from such New Technology in a respective country.

"**Specifications**" means the specifications for the Xcyte™ Dynabeads® described in Exhibit D.

"**Sublicensees**" means any person acting pursuant to a sublicense granted to it by FRESENIUS or its Affiliates under the terms of this Agreement.

"**Term**" has the meaning ascribed to it in Article 14.

"**Territory**" means all member states of the European Union, applicant states for membership in the European Union, and member states of the Commonwealth of Independent States, in each case as of March 24, 2003, Norway, Switzerland, and Iceland, and any other territory that may be later added pursuant to Section 3.4 hereof.

"**Third Party**" means any person other than FRESENIUS, XCYTE and their respective Affiliates.

"**Valid Patent Claim**" shall mean, on a country-by-country basis, either (a) a claim in any unexpired patent which has not been held invalid by a non-appealed or unappealable decision rendered by a court or other appropriate governmental body of competent jurisdiction; or (b) a claim in any patent application, provided such claim has not been pending longer than the later of (i) **[*]** years from the date of filing of the originally filed parent application; or (ii) **[*]** years from the date of request for examination in a country where such a request is necessary.

"**Xcellerated T Cells™**" means the T cells that are produced by the use of the Xcellerate™ Technology, including but not limited to the use of the XCYTE™ Dynabeads®, Xcellerate™ II Process or Xcellerate™ III Process or derivatives thereof.

"**Xcellerate™ II Process**" means a static process configuration as it exists as of the Effective Date and is defined in Xcyte Therapies Master Production Records **[*]** and was originally defined in Amendment **[*]** submitted to FDA on **[*]**.

"**Xcellerate™ III Process**" means the process configuration based on the WaveBioreactor as it exists as of the Effective Date and is defined in Xcyte Therapies Master Production Records **[*]** submitted to the FDA as Amendment **[*]**.

"**Xcellerate™ Technology**" means the XCYTE Patents and XCYTE Know-How.

"**XCYTE In-Licenses**" means the following agreements between (i) XCYTE and the indicated Third Parties: (A) License and Supply Agreement dated October 15, 1999 by and between XCYTE and Diaclone S.A., as amended (the "Diaclone In-License"); (B) Non-Exclusive License Agreement dated October 20, 1999 by and between XCYTE and Fred

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Hutchinson Cancer Research Center, as amended ("FHCRC Agreement"); and (C) License Agreement dated July 8, 1998 by and between XCYTE and Genetics Institute, L.L.C. ("GI"), as amended, and (ii) GI and the indicated Third Parties, which agreements are sublicensed to XCYTE under the GI Agreement: (A) License Agreement between GI and the Secretary of the Navy dated December 10, 1996, as amended, (B) License Agreement dated May 28, 1992 between GI and the University of Michigan, as amended, and (C) License Agreement dated July 20, 1993 between GI (as successor-in-interest to Repligen Corporation) and Dana Farber Cancer Institute, as amended.

"**XCYTE™ Dynabeads®**" means XR-CD3 and XR-CD28 antibodies produced at Lonza Biologics that are conjugated to super-paramagnetic **[*]** particles at Dynal Biotech A.S.A., according to the Specifications attached hereto as Exhibit D according to the methods and controls described in Master File **[*]** filed with the FDA, such production at Lonza Biologics and at Dynal Biotech A.S.A. taking place in all material respects under cGMP and all applicable laws and regulations.

"**XCYTE Know-How**" means any and all technical information, processes, formulae, data, engineering, inventions, chemical compounds, know-how and trade secrets owned or Controlled by XCYTE, in each case that is Confidential Information according to Article 9.1, that relate to the Xcellerated T Cells™, Xcellerate™ II Process and the Xcellerate™ III Process and any other proprietary information which has been reduced into writing and disclosed or transferred by XCYTE to FRESENIUS under this Agreement, including Improvements to the extent granted by XCYTE to FRESENIUS pursuant to Section 3.3.

"**XCYTE Patents**" means, to the extent owned or Controlled by XCYTE, or owned or Controlled jointly by XCYTE and FRESENIUS:

(i) the existing patents and patent applications listed in Exhibit A to this Agreement;

(ii) any patents and patent applications covering Improvements to the extent granted by XCYTE to FRESENIUS pursuant to Section 3.3;

(iii) any future patents issued from any patent applications referred to above and any future patents issued from a patent application filed, which corresponds to a patent or patent application identified above; and

(iv) any reissues, confirmations, renewals, extensions, all foreign counterparts (including PCTs), divisions, continuations-in-part (subject to Section 3.3), continuations, patents of addition, reexaminations, or all Supplementary Protection Certificates issued, assigned or licensed to XCYTE relating to the patents or patent applications identified above.

"**XR-CD3**" is the designation for XCYTE's reagent-CD3, which is the **[*]**, as used by XCYTE as of the Effective Date.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

"**XR-CD28**" is the designation for XCYTE's reagent-CD28, which is the **[*]**, as used by XCYTE as of the Effective Date.

1.2. **Certain Rules of Interpretation in this Agreement and the Schedules**.

(a) Unless otherwise specified, all references to monetary amounts are to United States of America currency (U.S. Dollars);

(b) The descriptive headings of Articles and Sections are inserted solely for convenience of reference and are not intended as complete or accurate descriptions of the content of such Articles or Sections;

(c) The use of words in the singular or plural, or with a particular gender, shall not limit the scope or exclude the application of any provision of this Agreement to such person or persons or circumstances as the context otherwise permits;

(d) The words "include" and "including" have the inclusive meaning frequently identified with the phrases "without limitation" and "but not limited to";

(e) Whenever a provision of this Agreement requires an approval or consent by a Party to this Agreement and notification of such approval or consent is not delivered within the applicable time limit, then, unless otherwise specified, the Party whose approval or consent is required shall be conclusively deemed to have withheld its approval or consent;

(f) Unless otherwise specified, time periods within or following which any payment is to be made or act is to be done shall be calculated by excluding the day on which the period commences and including the day on which the period ends and by extending the period to the next business day following if the last day of the period is not a business day in the jurisdiction of the Party to make such payment or do such act; and

(g) Whenever any payment is to be made or action to be taken under this Agreement is required to be made or taken on a day other than a business day, such payment shall be made or action taken on the next business day following such day to make such payment or do such act.

ARTICLE 2—RESEARCH PROGRAM.

2.1. **Objective**. FRESENIUS intends to conduct a Research Program to evaluate the Xcellerate™ Technology for commercial development under this Agreement. The Research Program will consist of (i) the Phase I/II HIV retroviral gene therapy clinical study conducted pursuant to a clinical protocol prepared by FRESENIUS and reviewed by XCYTE (the "Phase I/II Clinical Trial") and (ii) the manufacture of Xcellerated T Cells™ solely for use in the Phase I/II Clinical Trial and solely at FRESENIUS' GMP manufacturing facility known as "EUFETS" and located in Idar-Oberstein, Germany. FRESENIUS will consider in good faith

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

and incorporate to the extent reasonable any comments received from XCYTE on the Phase I/II Clinical Trial protocol, but FRESENIUS shall make the final decisions regarding the same.

2.2. **Conduct of Research Program**. FRESENIUS and XCYTE shall use all reasonable efforts to complete research works in accordance with the stated objective of the Research Program. Any research work performed by FRESENIUS pursuant hereto shall be performed in a good scientific manner and using good clinical practices acceptable to the relevant regulatory authorities and in compliance with all applicable laws. FRESENIUS shall keep XCYTE reasonably informed of its progress under the Research Program, including providing summary reports to XCYTE from time to time upon XCYTE's request. Within **[*]** days of Completion of the Phase I/II Clinical Trial, FRESENIUS will promptly deliver to XCYTE the Final Phase I/II Report. The preclinical and clinical data generated from the Research Program (the "Results") shall be deemed "Confidential Information" as defined in Article 9 and treated as such. Notwithstanding the foregoing, FRESENIUS shall disclose the Results to XCYTE and XCYTE shall be allowed to disclose the Results to Third Parties so long as FRESENIUS either consents in writing to the disclosure of Results to such Third Party or has previously consented to XCYTE's disclosure of such Results. FRESENIUS shall provide a response within [*] business days from receipt of XCYTE's written request to FRESENIUS requesting consent to disclose such Results to a Third Party(ies), otherwise FRESENIUS' prior written consent will be deemed to be given to XCYTE.

2.3. **Term of the Research Program**. The term of the Research Program shall be for a period commencing the Effective Date and end on the date of delivery of the Final Phase I/II Report, but in no event later than **[*]** (the "Research Program Term"), unless terminated earlier upon termination of this Agreement in accordance with Article 14 hereof.

2.4. **XCYTE Transfer of Technology for Phase I/II Clinical Trial**. At the request of FRESENIUS, XCYTE will use reasonable commercial efforts to transfer the technology, documentation and associated controls that XCYTE deems necessary to enable FRESENIUS to use the Xcellerate™ Technology to conduct the Research Program. In addition, XCYTE shall supply XCYTE™ Dynabeads® based on orders received at least **[*]** days in advance of requested delivery from FRESENIUS. During the Research Program, FRESENIUS will provide, on a monthly basis, good faith, non-binding 12 month rolling forecasts of its XCYTE™ Dynabeads® requirements. In addition, FRESENIUS shall pay XCYTE within thirty (30) days of receipt of invoice(s) from XCYTE (i) to the extent not already paid by FRESENIUS to XCYTE before the Effective Date, up to **[*]** to cover any and all direct costs (including but not limited to labor and overhead expenses) associated with the technology transfer as they are expended by XCYTE and (ii) **[*]**% of XCYTE's Cost of Goods for XCYTE™ Dynabeads® delivered by XCYTE. FRESENIUS acknowledges that XCYTE relies on Third Parties to provide components of the XCYTE Dynabeads® to fulfill XCYTE's obligations hereunder, and FRESENIUS and XCYTE agrees to cooperate in good faith to resolve any issues or delays that arise in connection with the supply of Xcyte Dynabeads® hereunder.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

2.5. **Confidentiality**. The Parties agree that all Xcellerate™ Technology to be transferred to FRESENIUS, if any, pursuant to this Agreement ("Transferred Technology, Know-How and Materials") shall be deemed to be "Confidential Information" in accordance with Section 9.1. FRESENIUS will take reasonable and appropriate measures to ensure that the confidentiality of all Transferred Technology, Know-How and Materials is preserved and that the Transferred Technology, Know-How and Materials are only used for the purposes authorized under the Agreement and in compliance with this Agreement.

ARTICLE 3 – EXCLUSIVE LICENSE.

3.1. **Exclusive License Grant to FRESENIUS.**

3.1.1. Grant. XCYTE hereby grants to FRESENIUS, an exclusive (even as to XCYTE), transferable, royalty-bearing license under the Xcellerate™ Technology, with the right to sublicense as permitted in Section 3.1.2, to research, develop, make, have made, use, import, sell and offer for sale Products in the Field in the Territory (an "Exclusive License").

3.1.2. Rights to Sublicense.

(a) FRESENIUS shall have the right to sublicense the rights granted to FRESENIUS in the Field in the Territory pursuant to this Agreement to any Affiliate or any Third Party for any Product developed by FRESENIUS (i) subject to receiving the prior written consent of XCYTE (which will not be unreasonably withheld) and (ii) subject to the terms and conditions of the XCYTE In-Licenses. XCYTE shall be primarily responsible for maintaining compliance of such sublicenses with the XCYTE In-Licenses, however, FRESENIUS acknowledges XCYTE may reasonably withhold consent to any FRESENIUS sublicense that does not comply with the terms and conditions of the XCYTE In-Licenses that are applicable to FRESENIUS, its Affiliates and/or Sublicensees. If a Sublicensee breaches the terms and conditions of the sublicense agreement, FRESENIUS and Xcyte shall determine in good faith whether termination of the sublicense agreement is required under this Agreement.

(b) FRESENIUS guarantees the making of all payments due to XCYTE by reason of completion of any milestones or Net Sales of any Products by any such Sublicensee or otherwise resulting from the action or inaction of such Sublicensee. Any such Sublicensee shall agree in writing (i) to keep books and records and permit XCYTE to review the information concerning such books and records that Sublicensee has in its possession in accordance with the terms of this Agreement and (ii) to comply with all other terms of this Agreement applicable to FRESENIUS (including all terms of this Agreement identified as applicable to a Sublicensee and all terms of the XCYTE In-Licenses disclosed to FRESENIUS and applicable to Sublicensee).

(c) FRESENIUS shall reimburse XCYTE for any amounts XCYTE owes to Third Parties under any XCYTE In-License as a result of any sublicenses granted by FRESENIUS pursuant to this Section 3.1.2. If FRESENIUS shows to XCYTE interest of a potential Sublicensee and upon FRESENIUS' request, XCYTE shall inform FRESENIUS of such amounts XCYTE owes to Third Parties under any XCYTE-In-License in due time in order

to enable FRESENIUS to factor such amounts into the negotiations with the potential sublicensee.

3.2. **XCYTE Transfer of Technology for Additional Pre-pivotal Clinical Trial and/or Pivotal Trial.** At the request of FRESENIUS, XCYTE will use reasonable commercial efforts to assist FRESENIUS in developing a clinical trial development plan and regulatory strategy for any Additional Pre-pivotal Clinical Trial or Pivotal Trial, as applicable, provided that, FRESENIUS shall be obligated to pay XCYTE, at minimum, the direct costs and expenses incurred by XCYTE (including but not limited to labor and overhead expenses) in connection with such services plus an additional profit markup to be mutually agreed upon in good faith, within **[*]** days of receipt of invoice(s).

3.3. **New Technologies.** Subject to the bona fide rights of Third Parties that may exist now or hereafter, excluding licenses granted by XCYTE in the Field and the Territory, and during the Term of the Agreement, XCYTE hereby grants to FRESENIUS the right to include in the Exclusive License as "Xcellerate™ Technology" any Improvements ("New Technology") in the Field and in the Territory, provided that FRESENIUS will be obligated, at minimum, to pay XCYTE (a) for the direct costs and expenses incurred by XCYTE (including but not limited to labor and overhead expenses) in connection with transferring such New Technology to FRESENIUS plus an additional profit markup to be mutually agreed upon in good faith, within **[*]** days of receipt of invoice(s), and (b) any milestones and royalties that accrue to Third Parties as a result of FRESENIUS' development and commercialization of a Product incorporating such New Technology, in addition to any milestones and royalties that are otherwise payable under this Agreement. Exhibit A shall be amended from time to time to add the patents and patent applications covering New Technologies that FRESENIUS elects to include under this Agreement. XCYTE shall notify FRESENIUS of New Technology in writing and FRESENIUS shall execute its right under this 3.3 within four months after receipt of such notice.

Nothing herein shall be construed as a waiver of first-to-use, first to invent defense by FRESENIUS.

3.4. **Inclusion of North America in the Territory**. FRESENIUS shall have the right of first negotiation during the Term of this Agreement to include North America (consisting of Canada, Mexico and the United States, and their possessions and territories) in the Territory under this Agreement as follows:

(a) During the Term of this Agreement, if XCYTE intends to either (a) begin good faith negotiations to reach a definitive agreement that would grant a Third Party a license in North America to intellectual property owned or licensed by XCTYE that is necessary or useful to exploit the Xcellerate™ Technology in the Field or (b) file for regulatory approval in a country in North America relating to the use of the Xcellerate™ Technology in the Field, then XCYTE shall notify FRESENIUS in writing of XCYTE's interest in negotiating and granting such license. FRESENIUS shall have up to **[*]** days, from the receipt of any notice from XCYTE

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

under this Section 3.4(a), to notify XCTYE if FRESENIUS is interested in negotiating with XCTYE to include North America in the Territory under this Agreement.

(b) If FRESENIUS sends a timely notice under Section 3.4(a) indicating its interest to negotiate with respect to North America, then the Parties agree to negotiate in good faith for **[*]** days from the receipt of any notice from FRESENIUS under Section 3.4(a). If the Parties do not reach agreement on the material terms for including North America in the Territory under this Agreement by the close of business on the expiration date of the **[*]** day negotiation period (or such other date the Parties may have mutually agreed to, the "Negotiation Deadline"), or if FRESENIUS does not exercise its right to negotiate under this Section 3.4 or fails to timely respond to the XCYTE notice under Section 3.4(a), then after the end of the applicable period, XCYTE shall be free to enter into agreement(s) granting such license rights in North America to any Third Party or to file for regulatory approval relating to the use of the Xcellerate™ Technology in the Field in any country in North America.

(c) The terms upon which North America shall be included in the Territory shall be set forth in an amendment to this Agreement, and except as set forth in the amendment, shall be governed by the same terms and conditions set forth in this Agreement.

ARTICLE 4 – SUPPLY.

4.1. **Supply of XCYTE™ Dynabeads®.**

4.1.1 Delivery of XCYTE™ Dynabeads; Orders and Forecasts. Following the completion of the Research Program and during the term of the Agreement, XCYTE shall supply XCYTE™ Dynabeads® to FRESENIUS and fill all firm purchase orders received from FRESENIUS and FRESENIUS shall take delivery and pay XCYTE for such XCYTE™ Dynabeads® ordered within **[*]** days of receipt of invoice(s) at a price equal to **[*]** of XCYTE's Cost of Goods. FRESENIUS shall place all firm purchase orders at least **[*]** days in advance. Furthermore, FRESENIUS shall provide, on a monthly basis, **[*]** month rolling forecasts of its XCYTE™ Dynabeads® requirements. In no event shall XCYTE be required to fill any purchase order (or series of orders) for any month that is (or are) in excess of **[*]** of the volumes specified for such month in FRESENIUS' most recent forecasts. If a purchase order (or series of orders) for any month is less than **[*]** of the volumes specified for such month in FRESENIUS' most recent forecast, XCYTE shall have the right to charge FRESENIUS **[*]** of the volume forecasted for such period in lieu of the purchase order cost. XCYTE shall confirm each order within **[*]** days after receipt of the order.

XCYTE will use reasonable commercial efforts to maintain its supply relationships and will consider in good faith FRESENIUS' supply needs and requirements in connection with negotiating agreements with its suppliers. If XCYTE fails to maintain its supply relationships and consequently experiences supply constraint, section 4.4 shall apply.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

4.1.2 Delays. FRESENIUS shall not require a delivery date of earlier than **[*]** days after the date of receipt by XCYTE of an order. XCYTE shall use its reasonable efforts to fill orders from FRESENIUS, which are in accordance with this Article 4 by the delivery date requested by FRESENIUS. XCYTE shall promptly notify FRESENIUS if at any time XCYTE has reason to believe that XCYTE will not be able to supply any FRESENIUS order on time or as estimated or agreed. Notwithstanding anything contained herein, in no event shall XCYTE be liable for any delay or failure to deliver XCYTE™ Dynabeads® for reasons beyond the control of XCYTE or its suppliers, provided, however, that XCYTE shall notify FRESENIUS promptly of anticipated delays and shall use all commercially reasonable efforts to fills such orders as soon as possible.

4.2 **XCYTE™ Dynabeads® Quality.**

4.2.1. The XCYTE™ Dynabeads® delivered to FRESENIUS shall have been manufactured in all material respects according to the Specifications (as attached as Exhibit D), cGMP and all applicable laws and regulations (the "Quality Standards").

4.2.2. Upon delivery, FRESENIUS shall inspect any delivery for identity and visual damage. FRESENIUS shall have **[*]** days from receipt of any delivery of XCYTE™ Dynabeads® to accept such delivery, or reject such delivery (or part thereof) to the extent the XCYTE™ Dynabeads® do not conform to the Quality Standards. FRESENIUS shall promptly return any rejected XCYTE™ Dynabeads® to XCYTE and FRESENIUS shall receive, at XCYTE's sole option, a credit, refund or replacement for such rejected delivery, or part thereof, promptly. In the event that XCYTE decides to replace such rejected XCYTE™ Dynabeads®, XCYTE shall use reasonable commercial efforts to do so within **[*]** days of such confirmation by XCYTE and XCYTE shall bear the cost of delivery and risk of loss or damage to the replacement XCYTE™ Dynabeads® during delivery. Notwithstanding anything to the contrary contained in this Agreement, XCYTE shall not be responsible for any XCYTE™ Dynabeads® if such XCYTE™ Dynabeads® are removed from their original vials prior to inspection by FRESENIUS or are modified in any manner, nor for any use or misuse or actions or inactions by any person or entity after delivery of the XCYTE™ Dynabeads® to FRESENIUS' carrier.

Within **[*]** months after the Effective Date, XCYTE shall use reasonable commercial efforts in order to renegotiate its commercial relationship with the manufacturer of the XCYTE™ Dynabeads® in order to achieve terms and conditions customary within the pharmaceutical industry, in particular with regards to the manufacturer's obligations towards quality of the XCYTE™ Dynabeads® and delivery dates; provided, however that in no event shall XCYTE be required to pay additional consideration for such changes in its commercial relationship with such manufacturer. XCYTE shall promptly notify FRESENIUS of the commencement of such negotiations with the manufacturer and shall keep FRESENIUS reasonably informed, to the extent that such negotiations are related to the quality and delivery dates of the XCYTE™ Dynabeads®. XCYTE hereby grants to FRESENIUS to the extent permitted under its agreements for the supply of XCYTE™ Dynabeads®, the conditions of sale, including liability, and delivery

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

as beneficial, if any, as the conditions of sale, including liability, and delivery agreed upon with the manufacturer of the XCYTE™ Dynabeads®. The Parties agree to amend Exhibit D from time to time to reflect any changes in the Specifications as a result of such negotiations with the manufacturer or as otherwise required by the manufacturer or mutual agreement of the Parties.

EXCEPT AS SET FORTH IN SECTION 13.1(h), THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, RELATED TO THE XCYTE™ DYNABEADS® AND XCYTE EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT (SUBJECT TO ARTICLE 13.1 (e) OF THIS AGREEMENT), MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. EXCEPT AS SET FORTH IN SECTION 16, FRESENIUS' EXCLUSIVE REMEDY FOR ANY FAILURE OF THE XCYTE™ DYNABEADS® TO CONFORM TO THE QUALITY STANDARDS, OR ANY OTHER BREACH OF WARRANTY, SHALL, AT XCYTE'S OPTION, BE CREDIT, REFUND OR REPLACEMENT AS SET FORTH IN THIS SECTION 4.2. EXCEPT AS SET FORTH IN SECTION 16, IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR ANY SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT OR ANY OTHER LEGAL THEORY. FRESENIUS ACKNOWLEDGES THAT XCYTE RELIES ON A THIRD PARTY MANUFACTURER TO SUPPLY THE XCYTE™ DYNABEADS® AND THEREFORE FRESENIUS' RIGHTS ARE LIMITED TO THE EXTENT OF XCYTE'S RIGHTS WITH SUCH SUPPLIER.

4.3 **Changes to Specification**. In no event shall XCYTE make changes to the Specifications that could adversely impact the T-cell activation or expansion capacity of the XCYTE™ Dynabeads® without FRESENIUS' prior written consent, such consent not to be unreasonably withheld. In the event of an intended or an actual change to the Specifications, Xcyte will inform Fresenius in a prompt and timely manner and provide information on the rationale, reason and time line of such change. Notwithstanding anything to the contrary, if a proposed change to the Specifications of the XCYTE™ Dynabeads® would require FRESENIUS to perform bridging or comparability studies pursuant to applicable laws and regulations, then XCYTE shall use reasonable commercial efforts to (i) provide FRESENIUS with adequate advance notice of such change and (ii) cooperate with and assist Fresenius to complete such studies.

4.4 **XCYTE™ Dynabeads® Manufacturing**. In the event and during the period that XCYTE fails to supply the forecasted volume of XCYTE™ Dynabeads® after reasonable advance written notice and a reasonable opportunity to cure, XCYTE shall not prohibit FRESENIUS from, in addition to other rights and remedies available at law or equity (including but not limited to damages or specific performance), manufacturing the XCYTE™ Dynabeads® on its own or from a Third Party and XCYTE hereby licenses to FRESENIUS or to the respective Third Party the Xcyte Technology required for the manufacture of the XCYTE™ Dynabeads® (to the extent permitted under applicable agreements with Third Parties) and shall use reasonable efforts to otherwise cooperate with such efforts by FRESENIUS. At such time that XCYTE is

able to recommence supply of the XCYTE™ Dynabeads® at the forecasted volume to FRESENIUS, FRESENIUS' rights to manufacture will terminate.

4.5 **Audit**. FRESENIUS (or its appointed representatives) shall have the right, at reasonable times and with reasonable prior written notice, to inspect facilities and to review processes, procedures and documents that are used or maintained by XCYTE (or Affiliates or Sublicensees). XCYTE shall use reasonable commercial efforts to provide an opportunity or right for FRESENIUS or any regulatory agency in the Territory to audit the manufacturing sites of the suppliers of XR-CD3, XR-CD28, and the XCYTE™ Dynabeads® as reasonably required by FRESENIUS or the regulatory agencies.

FRESENIUS shall not enter into any agreements on its own with any suppliers with respect to the Xcellerate™ Technology without the prior written consent of XCYTE.

4.6. **Communication Among Parties** Each of FRESENIUS and XCYTE shall appoint a specific individual who shall be available and shall act as a liaison person to facilitate the day-to-day communications among the Parties. The names of the initial liaison persons who shall act on behalf of each of the Parties shall be Dr. Wolfgang Höckh for FRESENIUS and Stewart Craig, Ph.D, Chief Operating Officer for XCYTE. Each of FRESENIUS and XCYTE agrees to notify the other in accordance with Section 21.1 of this Agreement in the event of a change in liaison person.

ARTICLE 5—DEVELOPMENT AND COMMERCIALIZATION.

5.1 **Development Efforts**. FRESENIUS shall use its commercially reasonable efforts and diligence in developing and commercializing Product(s) in accordance with its business, legal, medical and scientific judgment, and in undertaking investigations and actions required to obtain appropriate Regulatory Approval(s) necessary to market such Products in the Territory, such reasonable efforts and diligence to be in accordance with the efforts and resources FRESENIUS would use for product(s) owned by it or to which it has rights, which is of similar market potential at a similar stage in development as the Products taking into account the competitiveness of the marketplace and the proprietary position of the Product(s). As between the Parties, FRESENIUS shall be solely responsible for funding all costs of the development and commercialization of each Product FRESENIUS determines in its sole discretion to pursue. For the avoidance of doubt, FRESENIUS shall not be required to file for regulatory approval in each and every jurisdiction in the Territory.

5.2 **Development Reports**. FRESENIUS shall keep XCYTE informed in a timely manner as to the progress of the development of Products FRESENIUS determines, from time to time, to pursue. Beginning on the first day of the Calendar Quarter following the Effective Date and the first day of each Calendar Quarter thereafter, FRESENIUS shall provide XCYTE with a written report summarizing the activities of FRESENIUS, its Affiliates and Sublicensees related to research and development of Products and status of clinical trials and government approvals necessary for marketing Products.

5.3 **Diligence Milestone**. Without limiting the generality of the foregoing, FRESENIUS' due diligence obligations regarding the development of Products shall include (i) Initiating a Phase I/II Clinical Trial by **[*]**, (ii) Completing a Phase I/II Clinical Trial and providing XCYTE with a Final Phase I/II Report by **[*]**, (iii) Initiating either an Additional Pre-pivotal Clinical Trial or a Pivotal Trial relating to a Product by **[*]** and (iv) achieving a First Commercial Sale that results in Net Sales and payment of royalties to XCYTE pursuant to Section 6.1 for at least one Product on or before **[*]**, provided that such date shall be delayed by six month increments until **[*]** so long as FRESENIUS either (A) is currently conducting and actively pursuing a Pivotal Trial relating to a Product or (B) is experiencing delays in receiving its first regulatory approval of a Product required for First Commercial Sale and such delay was not directly caused by FRESENIUS nor within FRESENIUS' control to cure.

5.4 **Review of Clinical Trial Protocols**. XCYTE shall have the right to review all clinical protocols prior to the Initiation of each clinical trial to be conducted by FRESENIUS involving Xcellerate™ Technology to assure compliance with applicable laws and regulations. Neither FRESENIUS, its Affiliates nor its Sublicensees shall Initiate any clinical trial involving the Xcellerate™ Technology without the prior review of XCYTE. XCYTE shall review all clinical protocols within **[*]** days of receipt. FRESENIUS will consider in good faith and incorporate to the extent reasonable any comments received from XCYTE on the clinical protocols, but FRESENIUS shall make all final decisions regarding the same.

5.5 **Marketing Cooperation**. FRESENIUS will cooperate with XCYTE to ensure that any references to the Xcellerate™ Technology in the Territory in the Field by FRESENIUS, its Affiliates, Sublicensees or each of its respective agents is consistent with XCYTE's U.S. marketing for the Xcellerate™ Technology to maintain reasonable continuity of promotion and global branding. FRESENIUS, its Affiliates, Sublicensees or each of its respective agents shall not use XCYTE's name or any adaptation thereof without the prior written consent of XCYTE.

5.6 **Quality Audits**. FRESENIUS shall reasonably cooperate with XCYTE in ensuring and maintaining that all Products meet cGMP and quality standards applicable in the Territory in all material respects. FRESENIUS shall perform quality control tests for any Xcellerate™ Technology referenced in Products as required by all laws and regulations in the Territory. XCYTE (or its appointed representatives) shall have the right, at reasonable times and with reasonable prior written notice, to inspect production facilities and to review processes, procedures and documents that are used or maintained by FRESENIUS (or Affiliates or Sublicensees) to confirm compliance with the applicable cGMP and quality standards. If XCYTE observes a condition, which causes it to believe that the Xcellerate™ Technology used in Product is not being manufactured in accordance with the applicable cGMP and quality standards, FRESENIUS shall reasonably determine if any additions or modifications reasonably requested by XCYTE to bring the facilities, processes and/or procedures into compliance have to be made. For purposes of clarity, FRESENIUS is regulated by all applicable laws, regulations and governmental acts in the Territory regarding the manufacture of the Products.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

ARTICLE 6 – ROYALTIES AND MILESTONES.

6.1 **Royalties Payable by FRESENIUS.**

6.1.1 In consideration for the Exclusive Licenses granted to FRESENIUS herein, during the Royalty Term, FRESENIUS shall pay to XCYTE royalties on Net Sales of Products. Such royalties shall be established at the following rates, determined on a product-by-product basis:

(a) **[*]** of the first **[*]** in aggregate Net Sales of Products in each calendar year; and

(b) **[*]** of incremental aggregate Net Sales of Products in excess of **[*]** in each calendar year.

(c) The aggregate Net Sales amounts set forth in Sections 6.1.1(a)–(b) shall be adjusted on each **[*]** year anniversary of the Effective Date in accordance with increases in the Consumer Price Index (CPI) U.S. Cities' Average – All Items for all urban consumers (not seasonally adjusted), as published by the U.S. Department of Labor Statistics. For avoidance of doubt, the aggregate Net Sales amount shall be adjusted upwards every **[*]** years by a factor calculated by comparing the CPI for the year in which the adjustment is occurring with the CPI for the year that is **[*]** years prior, as further described in the formula NNS = (1 + (NCPI – BCPI)/BCPI x 100) x BNS, wherein NNS is the new aggregate Net Sales amount, NCPI is the new CPI, BCPI is the CPI for the base year 2003, and BNS is the base aggregate Net Sales amount for 2003.

6.1.2 The royalties payable under Section 6.1.1 shall each be reduced by **[*]** percent (**[*]**%) until the expiration of the Royalty Term upon the last to expire Valid Patent Claim included in **[*]**, or parallel patent to each of aforementioned PCT applications, applicable to the Territory.

6.1.3 In the event that the last Valid Patent Claim included in the XCYTE Patents has expired or in the event that the Product is manufactured, marketed, and sold without the use of a Valid Patent Claim included in the XCYTE Patents, however, provided that FRESENIUS uses the XCYTE Know-How, any royalty rate payable by FRESENIUS to XCYTE shall be reduced to **[*]**% until the expiration of the Royalty Term.

6.1.3 **Right of Offset**. In the event that FRESENIUS and XCYTE reasonably and mutually determine that in any country in the Territory the use of the XCYTE Technology in the Field infringes upon the patent rights of a Third Party, and FRESENIUS obtains a license under such Third Party rights, then, in lieu of any other right or remedy, FRESENIUS shall have the right to deduct from the royalties otherwise due and payable under Section 6.1 arising from the sale of Product in such country, **[*]**, up to a maximum of **[*]** percent (**[*]**%) of the royalties otherwise payable, that FRESENIUS is obliged to pay under the Third Party license in order to obtain rights from such Third Party in such country.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

6.2 **Third Party Royalties.** During the Royalty Term, XCYTE shall pay any Third Party royalties owed on account of Net Sales of Products in the Territory due to use of the Xcellerate™ Technology other than royalties payable for New Technologies. During the Royalty Term, in the case of New Technologies, and following expiration of the Royalty Term in the case of the Xcellerate™ Technology, FRESENIUS shall pay any Third Party royalties owed on account of Net Sales of Products in the Territory.

6.3. **Non-Royalty Sales.**

No royalty shall be payable under this Article 6 with respect to sales of Products among FRESENIUS and its Affiliates or its Sublicensees or among Sublicensees and their Affiliates, but a royalty shall be due upon the subsequent sale of the Product to a Third Party.

6.4. **Milestone Payments.**

As additional consideration for the licenses, rights and privileges granted to it hereunder, FRESENIUS shall pay to XCYTE the following milestone payments to XCYTE within **[*]** days of the first occurrence of each event set forth below with respect to each Product, whether such events are achieved by FRESENIUS, its Affiliates or Sublicensees.

6.4.1 Upon Initiation of the Phase I/II Clinical Trial, FRESENIUS will pay to XCYTE the sum of **[*]**.

6.4.2 Upon Completion of the Phase I/II Clinical Trial, provided that either the Phase I/II Clinical Trial achieves the Clinical Endpoints or FRESENIUS elects to initiate the first Pivotal Trial, FRESENIUS will pay to XCYTE the sum of **[*]**.

6.4.3 Upon Completion of the first Pivotal Trial that supports submission for Regulatory Approval, FRESENIUS will pay to XCYTE the sum of **[*]**.

6.4.4 The earlier of the first Regulatory Approval or First Commercial Sale in any country, FRESENIUS will pay to XCYTE the greater of (i) **[*]** or (ii) **[*]**, less any milestone payments previously paid by FRESENIUS to XCYTE pursuant to this Section 6.4.

6.4.5 All payments pursuant to this Section 6.4 shall be made by wire transfer of immediately available funds, which payments shall be non-refundable and non-creditable.

ARTICLE 7—REPORTS AND ACCOUNTING, REPORTS AND COSTS.

7.1. **Reports, Exchange Rates**.

7.1.1. During the term of this Agreement following the first Calendar Quarter in which Net Sales occur and for the remainder of the Royalty Term, FRESENIUS shall furnish to XCYTE, with respect to each Calendar Quarter, a written report showing on a consolidated basis

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

in reasonably specific detail and on a Product-by-Product and country-by-country basis, (a) the gross sales of Products sold by FRESENIUS, its Affiliates and its Sublicensees in the Territory during the corresponding Calendar Quarter and the calculation of Net Sales from such gross sales; (b) the royalties payable in U.S. dollars, if any, which shall have accrued hereunder based upon Net Sales of Products; (c) the withholding taxes, if any, required by law to be deducted in respect of such royalties; (d) the dates of the first Net Sales of each Product in each country in the Territory if it has occurred during the corresponding Calendar Quarter; and (e) the exchange rates (as determined pursuant to Section 7.1.4 herein) used in determining the royalty amount expressed in U.S. dollars (collectively, "Reports").

7.1.2. FRESENIUS shall include in each permitted sublicense granted by it pursuant to this Agreement a provision requiring its Sublicensees to make Reports to FRESENIUS within **[*]** days of the close of each Calendar Quarter, to keep and maintain records of sales made pursuant to such sublicense and to grant access to such Reports by XCYTE's independent accountant to the same extent required with respect to FRESENIUS' Reports under this Agreement.

7.1.3. Reports shall be due on the **[*]** day following the close of each Calendar Quarter. FRESENIUS shall keep complete and accurate records in sufficient detail to properly reflect all gross sales and Net Sales and to enable the royalties payable hereunder to be determined.

7.1.4. With respect to sales (if any) of Products invoiced in U.S. dollars, the gross sales, Net Sales, and royalties payable shall be expressed in U.S. dollars. With respect to sales of Products invoiced in a currency other than U.S. dollars, the gross sales, Net Sales and royalties payable shall be expressed in the currency of the invoice issued by the Party making the sale together with the U.S. dollars equivalent of the royalty payable, calculated using the exchange rate for such currency reported by the Bank of America N.A. on the last business day of the applicable Calendar Quarter.

7.2. **Audits**.

7.2.1. XCYTE Audit

(a) Upon the written request of XCYTE and not more than once in each calendar year, FRESENIUS shall permit an independent certified public accounting firm of internationally recognized standing, selected by XCYTE and reasonably acceptable to FRESENIUS, at XCYTE's expense, to have access during normal business hours to such of the records of FRESENIUS and its Affiliates as may be reasonably necessary to verify the accuracy of the Reports hereunder for any year ending not more than thirty-six (36) months prior to the date of such request. The accounting firm shall disclose to XCYTE only whether the records are correct or not and the specific details concerning any discrepancies. No other information shall be shared.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(b) If such accounting firm concludes that additional royalties were owed during such period, FRESENIUS shall pay the additional royalties within **[*]** days of the date XCYTE delivers to FRESENIUS such accounting firm's written report so concluding. The fees charged by such accounting firm shall be paid by XCYTE; provided, however, if the audit discloses that the royalties payable by FRESENIUS for the audited period are more than **[*]** percent (**[*]**%) of the royalties actually paid for such period, then FRESENIUS shall pay the reasonable fees and expenses charged by such accounting firm.

(c) Upon the expiration of thirty-six (36) months following the end of any calendar year, the calculation of royalties payable with respect to such year shall be binding and conclusive upon XCYTE, and FRESENIUS, its Affiliates and Sublicensees shall be released from any liability or accountability with respect to royalties for such year.

7.2.2 FRESENIUS Audit

XCYTE shall keep and maintain all records relevant for the showing of the Cost of Goods.

(a) Upon the written request of FRESENIUS and not more than once in each calendar year, XCYTE shall permit an independent certified public accounting firm of internationally recognized standing, selected by FRESENIUS and reasonably acceptable to XCYTE, at FRESENIUS' expense, to have access during normal business hours to such of the records of XCYTE and its Affiliates as may be reasonably necessary to verify the accuracy of the invoices for the Cost of Goods hereunder for any year ending not more than thirty-six (36) months prior to the date of such request. The accounting firm shall disclose to FRESENIUS only whether the records are correct or not and the specific details concerning any discrepancies. No other information shall be shared.

(b) If such accounting firm concludes that excess Costs of Goods have been charged, XCYTE shall restitute FRESENIUS for such excess Costs of Goods within thirty (30) days of the date FRESENIUS delivers to XCYTE such accounting firm's written report so concluding. The fees charged by such accounting firm shall be paid by FRESENIUS; provided, however, if the audit discloses that the refund payable by XCYTE for the audited period are more than five percent (5%) of the Cost of Goods actually paid for such period, then XCYTE shall pay the reasonable fees and expenses charged by such accounting firm.

(c) Upon the expiration of thirty-six (36) months following the end of any calendar year, the calculation of Cost of Goods payable with respect to such year shall be binding and conclusive upon FRESENIUS, and XCYTE and its Affiliates shall be released from any liability or accountability with respect to Cost of Goods for such year.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

7.3. **Confidential Financial Information.**

Each Party shall treat all financial information subject to review under this Article 7 as Confidential Information of the other Party, and shall cause its accounting firm to retain all such financial information in confidence.

ARTICLE 8—PAYMENTS. LATE PAYMENTS

8.1. **Payment Terms.**

Royalties shown to have accrued by each Report provided for under Article 7 of this Agreement shall be due on the date such Report is due. Payment of royalties in whole or in part may be made in advance of such due date. Milestone payments shall be paid within **[*]** days of the first occurrence of each milestone event with respect to each Product, which payments shall be nonrefundable and non-creditable. All other payments shall be due within **[*]** days of receipt of invoice(s) from XCYTE.

Past due payments shall accrue interest at a rate of **[*]** percent (**[*]**%) per annum, or the maximum applicable rate permitted by law, unless occurring as a result of an event the Parties agree constitutes an Event of Force Majeure or as a result of a good faith dispute between the Parties regarding performance or breach of their obligations hereunder.

8.2. **Payment Method.**

All payments by FRESENIUS to XCYTE under this Agreement shall be made by bank wire transfer in immediately available funds to the bank account designated by XCYTE in writing.

8.3. **Exchange Control.**

If at any time legal restrictions prevent the prompt remittance of part or all royalties or milestone payments with respect to any country in the Territory where Product is sold, payment shall be made through such lawful means or method as the Parties reasonably shall determine.

8.4. **Withholding Taxes.**

Except as otherwise provided below, all amounts owing from FRESENIUS to XCYTE under this Agreement are gross amounts. FRESENIUS shall be entitled to deduct the amount of any withholding taxes payable or required to be withheld by FRESENIUS, its Affiliates or Sublicensees, to the extent FRESENIUS, its Affiliates or Sublicensees pay to the appropriate governmental authority on behalf of XCYTE such taxes. FRESENIUS shall use commercially reasonable efforts to minimize any such taxes, levies or charges required to be withheld on behalf of XCYTE by FRESENIUS, its Affiliates or Sublicensees. FRESENIUS shall promptly deliver to XCYTE proof of payment of all such taxes, levies and other charges, together with copies of all communications from or with such governmental authority with respect thereto.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

ARTICLE 9 – CONFIDENTIALITY.

9.1. **Non-Disclosure Obligations.**

Except as otherwise provided in this Article 9, during the Term and for a period of five (5) years thereafter, each Party shall maintain in confidence, and use only for purposes as expressly authorized and contemplated by this Agreement, all confidential or proprietary information, data, documents or other materials supplied by the other Party under this Agreement and marked or otherwise identified as "Confidential." For purposes of this Agreement, information and data described above including all the Xcellerate™ Technology shall be hereinafter referred to as "Confidential Information." Each Party shall use at least the same standard of care as it uses to protect its own Confidential Information to ensure that its and its Affiliates' employees, agents, consultants and clinical investigators only make use of Confidential Information for purposes as expressly authorized and contemplated by this Agreement and do not disclose or make any unauthorized use of such Confidential Information.

9.2. **Permitted Disclosures.**

Notwithstanding the foregoing, the provisions of Section 9.1 hereof shall not apply to information, documents or materials that the disclosing Party can conclusively establish:

(a) have become published or otherwise entered the public domain other than by acts of the disclosing Party or its Affiliates or Sublicensees in contravention of this Agreement;

(b) are permitted to be disclosed by prior consent of the other Party;

(c) have become known to the disclosing Party by a Third Party, provided such Confidential Information was not obtained by such Third Party directly or indirectly from the other Party under this Agreement on a confidential basis;

(d) prior to disclosure under the Agreement, was already in the possession of the disclosing Party, its Affiliates or Sublicensees, provided such Confidential Information was not obtained directly or indirectly from the other Party under this Agreement;

(e) is disclosed in a press release agreed to by both Parties hereto, which agreement shall not be unreasonably withheld; or

(f) are required to be disclosed by the disclosing Party to comply with any applicable law, regulation or court order, or are reasonably necessary to obtain patents, copyrights or authorizations to conduct clinical trials with, and to commercially market Product(s), provided that the disclosing Party shall provide prior notice of such disclosure to the other Party and take reasonable and lawful actions to avoid or minimize the degree of disclosure.

9.3. **Terms of the Agreement.**

FRESENIUS and XCYTE shall not disclose any terms or conditions of this Agreement to any Third Party without the prior consent of the other Party, except as required by applicable laws, regulations or a court order (and in any such case the disclosing Party shall provide notice to the other Party and takes reasonable and lawful actions to avoid or minimize the degree of such disclosures).

9.4. **Press Releases and Other Disclosures to Third Parties.**

Neither XCYTE nor FRESENIUS will, without the prior consent of the other, issue any press release or make any other public announcement or furnish any statement to any Person (other than either Parties' respective Affiliates) concerning the existence of this Agreement, its terms and the transactions contemplated thereby, except for (i) general statement referring to the existence of this Agreement, and identity of the Parties but no other details, (ii) disclosures made in compliance with Sections 9.2 and 9.3 hereof, (iii) attorneys, consultants, and accountants retained to represent them in connection with the transactions contemplated hereby and (iv) disclosure required by the U.S. Securities and Exchange Commission and other government agencies; (v) occasional, brief comments by the respective officers of FRESENIUS and XCYTE consistent with such guidelines for public statements as may be mutually agreed by FRESENIUS and XCYTE made in connection with routine interviews with analysts or members of the financial press.

9.5. **Publications Regarding Results of the Research Program.**

No Party may publish, present or announce results of the Research Program either orally or in writing (the "Publication") without obtaining the written consent of the other Party. The other Party shall have thirty (30) days from receipt of the proposed Publication to provide comments and/or proposed changes to the disclosing Party. The disclosing Party shall take into account the comments and/or proposed changes made by the other Party on any Publication and shall agree to have employees or others acting on behalf of the other Party be mentioned as co-authors on any Publication describing results to which such persons have contributed. If the other Party reasonably determines the Publication would amount to the public disclosure of such Party's Confidential Information and/or of a patentable invention upon which a patent application should be filed prior to any such disclosure, submission of the concerned Publication to Third Parties shall be delayed for a sixty (60) day period from the date of said notice, or for such longer period which may appear necessary for appropriately deleting Confidential Information from the proposed Publication and/or drafting and filing a patent application covering such invention.

ARTICLE 10—INVENTIONS AND PATENTS.

10.1. **Ownership of Inventions.**

10.1.1. **Inventorship.** Subject to the terms of this Article 10, inventorship of any inventions arising out of the Research Program or under this Agreement shall be determined

according to U.S. law, subject to FRESENIUS' obligations under the German Act governing employee inventions (Arbeitnehmererfindungsgesetz). Any invention arising out of the Research Program or otherwise under this Agreement shall be promptly disclosed to the other Party. Any inventions or other intellectual property invented solely by one Party shall be owned by that Party. For avoidance of any doubt, any inventions or other intellectual property made, or data derived, by XCYTE or its employees, consultants or agents, without any assistance from FRESENIUS other than the fact that such invention or intellectual property was made on or using facilities or equipment owned or affiliated with FRESENIUS or EUFETS, shall be owned by XCYTE. Each Party shall cooperate with the other Party at such Party's request and expense to document and/or perfect the assignment of such inventions and intellectual property.

10.1.2. **Ownership of Xcellerate™ Technology and Jointly-Invented Inventions Related Thereto**. All right, title and interest to the Xcellerate™ Technology shall (subject to any licenses explicitly granted hereunder) at all times remain with and be vested in XCYTE. Any invention or other intellectual property made, and data derived, jointly by FRESENIUS or its respective employees, consultants or agents and XCYTE or its respective employees, consultants or agents arising out of the Research Program or out of any technology transfer performed by XCYTE in accordance with Sections 3.2 or 3.3 that relates to the Xcellerate™ Technology shall be owned by XCYTE. FRESENIUS shall promptly notify XCYTE of any such invention or other intellectual property, and cooperate with XCYTE at XCYTE's request and expense, in the preparation, filing, prosecution, and defense of patent applications and patents relating thereto. Subject to the terms of this Article 10, at XCYTE's request, FRESENIUS shall assign, and hereby assigns, to XCYTE, all right, title and interest to joint FRESENIUS and XCYTE inventions that relate to the Xcellerate™ Technology, and shall in a reasonably timely manner execute those documents, as requested by XCYTE, necessary to document and/or perfect the assignment of such inventions and intellectual property. If XCYTE decides to request assignment from FRESENIUS pursuant to this Section 10.1.2, XCYTE shall reimburse FRESENIUS for all payments that may be due to FRESENIUS employees who are inventors based on the commercial use of such jointly-made invention pursuant to FRESENIUS' obligations under the German Act governing employee inventions (Arbeitnehmererfindungsgesetz), provided that XCYTE shall be entitled to a good faith estimate of such payments prior to its decision.

10.1.3. **Grant-Back License to XCYTE**. FRESENIUS hereby grants to XCYTE a perpetual, irrevocable, non-exclusive, fully paid worldwide license, with the right to sublicense, inventions or other intellectual property invented solely by FRESENIUS or its respective employees, consultants or agents that directly relate to the Xcellerate™ Technology and which have been conceived in the course of the collaboration under this Agreement to develop, make, have made, use, import, sell, and offer for sale products. Such license shall neither include the Field for subject matter nor the Territory for geographic purposes. FRESENIUS shall in a reasonably timely manner execute any documents, as requested by XCYTE, necessary to further document such license.

10.2. **Patent Prosecution and Maintenance.**

10.2.1. XCYTE shall be responsible for and shall control the preparation, filing, prosecution, grant and maintenance of all XCYTE Patents, including patents covering joint inventions pursuant to Section 10.1.2. XCYTE shall prepare, file, prosecute and maintain such XCYTE Patents in good faith consistent with its customary patent policy and its reasonable business judgment, and shall consider in good faith the interests of FRESENIUS in so doing.

10.2.2. XCYTE agrees to furnish to FRESENIUS copies of all relevant documentation and any proposed filing in the Field in the Territory so that FRESENIUS may be currently and promptly informed of the continuing prosecution. XCYTE shall in good faith periodically consult with FRESENIUS with regards to FRESENIUS' patent strategy in the Field and in the Territory. FRESENIUS shall bear its own costs relating to its monitoring of XCYTE's patent activities. XCYTE will not withdraw, terminate, invalidate or otherwise modify all or any part of the XCYTE Patents licensed to FRESENIUS under this Agreement or any claims thereof (including, without limitation, cause the XCYTE Patents or any part thereof to be reissued, reexamined, opposed or part of an interference, except as required by law), without the prior written consent of FRESENIUS. **[*]** of all costs that XCYTE incurs after August 1, 2003 in filing, prosecuting and maintaining XCYTE Patents in the Territory shall be borne by XCYTE and shall be promptly reimbursed by FRESENIUS; provided, however, that FRESENIUS shall have the right to determine which countries in the Territory it will reimburse the costs of filing, prosecuting and maintaining the XCYTE Patents. To the extent FRESENIUS does not reimburse the costs of filing, prosecuting and maintaining XCYTE Patents in any country in the Territory within **[*]** days after FRESENIUS' receipt of a written notice from XCYTE of FRESENIUS' failure to timely pay such costs, then FRESENIUS' right and license to such XCYTE Patent under this Agreement shall terminate in such country. Should XCYTE elect to abandon or otherwise forfeit a pending patent application or granted patent right, each with regard to the Field and the Territory, it will (a) provide FRESENIUS with written notice as soon as reasonably possible after making such election but in any event no later than **[*]** days before FRESENIUS would be faced with a possible loss of rights, (b) give FRESENIUS the right, at FRESENIUS' discretion and sole expense, to prepare and file the priority application(s) (but only to the extent that such are related to Product), and (c) offer reasonable assistance in connection with such preparation and filing at no cost to FRESENIUS except for reimbursement of reasonable out-of-pocket expenses incurred by XCYTE in rendering such assistance. FRESENIUS, at its discretion and cost, will prosecute such application(s) and maintain any patents derived therefrom; provided, however, that any such patents application or patents prosecuted or maintained by FRESENIUS will in no way be included, or be deemed to be included, in the XCYTE Patents.

10.2.3. All right, title and interest to inventions made in course of the Research Program solely by FRESENIUS, FRESENIUS' Affiliates, and/or Sublicensees (the "FRESENIUS Patents") shall (subject to any licenses explicitly granted hereunder) at all times remain with and be vested in FRESENIUS. FRESENIUS shall promptly disclose and provide a copy of all relevant documentation on FRESENIUS patents that relate to the Xcellerate™

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Technology to XCYTE. Subject to Section 10.2.1, FRESENIUS shall be responsible for and shall control the preparation, filing, prosecution, grant and maintenance, of any patents and patent applications having as subject matter inventions owned solely by FRESENIUS. FRESENIUS shall have the right, but not the obligation, at its sole discretion and expense, prepare, file, prosecute and maintain such patent rights in good faith consistent with its customary patent policy and its reasonable business judgment. Should FRESENIUS elect to abandon or otherwise forfeit a pending patent application or granted patent right, each with regard to the Field and the Territory, it will (a) provide XCYTE with written notice as soon as reasonably possible after making such election but in any event no later than **[*]** days before XCYTE would be faced with a possible loss of rights, (b) give XCYTE the right, at XCYTE's discretion and sole expense, to prepare and file the priority application(s) (but only to the extent that such are related to Product), and (c) offer reasonable assistance in connection with such preparation and filing at no cost to XCYTE except for reimbursement of reasonable out-of-pocket expenses incurred by FRESENIUS in rendering such assistance. XCYTE, at its discretion and cost, will prosecute such application(s) and maintain any patents derived therefrom. Furthermore, XCYTE shall have the right to assume responsibility for prosecuting and maintaining any FRESENIUS Patent that relates to the Xcellerate™ Technology that FRESENIUS intends to abandon or otherwise cause or allow to be forfeited. FRESENIUS shall give XCYTE notice thereof within a reasonable period prior to allowing such patents or certain claims therein to become abandoned or otherwise forfeited.

10.2.4. The Parties shall at all times fully cooperate in order to reasonably implement the foregoing provisions.

10.3. **Enforcement of XCYTE Technology.**

10.3.1. In the event that a Party becomes aware that any of the XCYTE Patents or Xcellerate™ Technology in the Field in the Territory is infringed or misappropriated by a Third Party, such Party will promptly notify the other Party in writing. The notice shall set forth the facts of such infringement or misappropriation in reasonable detail. FRESENIUS will have the first right, but not the obligation, to institute, prosecute and control any action or proceeding with respect to any claim of infringement of any Third Party patents (as provided above) or any of the XCYTE Patents and Xcellerate™ Technology, however, solely in the Field in the Territory, using counsel of its choice and at its cost. For purposes of clarity, XCYTE shall have the first right, but not the obligation, to institute, prosecute and control any action or proceeding with respect to any claim of infringement of any Third Party patents or any of the XCYTE Patents and Xcellerate™ Technology in all other cases, including infringement of the XCYTE Patents or Xcellerate™ Technology where the Field and/or the Territory is part of the scope of infringement alleged. If FRESENIUS does not institute, prosecute and control any action or proceeding within **[*]** days after giving or receiving notice (as set forth above), then XCYTE, after notifying FRESENIUS in writing, will be entitled but will have no obligation to institute, prosecute and control any action or proceeding with respect to any claim of infringement of any Third Party patents or any of the XCYTE Patents and Xcellerate™ Technology, or otherwise abate the offending activity using counsel of its choice and at its cost. The latter sentence shall apply

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

mutatis mutandis where XCYTE has the first right to enforce the Xcellerate™ Technology, but only to the extent that the claim of infringement directly and materially affects FRESENIUS' rights in the Field and/or the Territory pursuant to this Agreement. In any event, XCYTE and FRESENIUS will provide reasonable assistance to one another and will reasonably cooperate in any such litigation at the other's request without expense to the requesting Party. FRESENIUS shall consider in good faith all of XCYTE's concerns with regards to actions of FRESENIUS in any enforcement activity that may risk the invalidity of the XCYTE Patents. No settlement, consent judgment or other voluntary final disposition of a suit may be entered into without the consent of the other Party if such settlement would subject the other Party to an injunction or if such settlement or judgment would materially diminish or limit the rights and activities of the other Party (which consent shall not be withheld unreasonably). XCYTE and FRESENIUS will recover their respective actual out-of-pocket expenses, or equitable proportions thereof, associated with any litigation or settlement thereof from any recovery made by any Party but only to the extent that such recovery is associated with a claim of infringement that directly and materially affects FRESENIUS' rights in the Field and/or the Territory pursuant to this Agreement. Any excess amount attributable to infringement of any patent or patent application included within XCYTE Patents that directly and materially affects FRESENIUS' rights in the Field and/or the Territory pursuant to this Agreement, will be shared between XCYTE and FRESENIUS and distributed proportionately between XCYTE and FRESENIUS (calculated on the basis of the Parties' respective financial interest in the sales of Product that were the subject of the litigation had such sales been made by FRESENIUS, or its Affiliates or Sublicensees as provided in this Agreement), provided in no event will XCYTE's share of the excess amount exceed the royalties which would otherwise be due to XCYTE for the sales of Product that were the subject of the litigation had such sales been made by FRESENIUS or its Affiliates or Sublicensees.

10.3.2. FRESENIUS shall have the right, at its sole expense, to determine the appropriate course of action to enforce the FRESENIUS Patents or otherwise abate the infringement thereof, to take (or refrain from taking) appropriate action to enforce the FRESENIUS Patents, to control any litigation or other enforcement action and to enter into, or permit, the settlement of any such litigation or other enforcement action with respect to the FRESENIUS Patents. All monies recovered upon the final judgment or settlement of any such suit to enforce any FRESENIUS Patents shall be retained by FRESENIUS. XCYTE and FRESENIUS shall fully cooperate with each other in any action to enforce the FRESENIUS Patents. If FRESENIUS fails to take any action to enforce any FRESENIUS Patent that relates to the Xcellerate™ Technology or control any litigation with respect to such FRESENIUS Patents within a period of **[*]** days after reasonable notice of the infringement of such FRESENIUS Patents, then XCYTE shall have the right to bring and control any such action by counsel of its own choice, and in such case, all monies recovered upon the final judgment or settlement of any such suit to enforce such FRESENIUS Patents shall be retained by XCYTE. In such a case, FRESENIUS shall cooperate fully with XCYTE, at XCYTE's expense, in its efforts to enforce the FRESENIUS Patents, including being joined as a party to such action if necessary.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

10.4. **Prior Patent Rights**. Notwithstanding anything to the contrary in this Agreement, with respect to any XCYTE Patents that are subject to the XCYTE In-Licenses, the rights and obligations of the Parties under Section 10.2 and 10.3 shall be subject to XCYTE's licensors' rights to participate in and control prosecution, maintenance and enforcement of such XCYTE Patents in accordance with the terms and conditions of the applicable XCYTE In-License.

ARTICLE 11—INFRINGEMENT ACTIONS BY THIRD PARTIES.

Subject to the obligations of each Party pursuant to Article 16, if FRESENIUS, XCYTE or their respective Affiliates, or FRESENIUS' Sublicensees, is sued by a Third Party for infringement of a Third Party's patent because of the use of the Xcellerate™ Technology in the Field in the Territory, the Party which has been sued shall promptly notify the other Party in no event later than **[*]** days of the institution of such suit. The notice shall set forth the facts of such infringement and provide evidence of such infringement that is within the notifying Party's control. If FRESENIUS or its Sublicensees are sued, FRESENIUS shall have the right, in its sole discretion, to control the defense of such suit at its own expense, and XCYTE shall have the right to be represented by advisory counsel of its own selection, at its own expense, and shall cooperate fully in the defense of such suit and furnish to XCYTE all evidence and assistance in its control. If FRESENIUS does not elect within **[*]** days after receipt of such notice to so control the defense of such suit, XCYTE may undertake such control at its own expense, and FRESENIUS shall then have the right to be represented by advisory counsel of its own selection and at its own expense, and FRESENIUS shall cooperate fully in the defense of such suit and furnish to XCYTE all evidence and assistance in FRESENIUS' control. The Party controlling the suit shall keep the other Party reasonably informed of the status of the suit under this Article 12. In no event may the Party controlling the suit settle or otherwise consent to an adverse judgment in such suit that diminishes the rights or interests of the non-controlling Party without the express written consent of the non-controlling Party. Any judgments, awards, settlements or damages payable with respect to legal proceedings covered by this Article 12 shall be paid by or to the Party which controls the litigation; provided, however, that if the other Party has elected to be represented by advisory counsel, the other Party shall receive the actual reasonable cost of its legal fees for such advisory counsel.

ARTICLE 12—REGULATORY ASSISTANCE.

Each Party will provide the other Party access to all of its regulatory filings (and underlying data), relating to the products using the Xcellerate™ Technology, to the extent such filings and data (including raw data and relevant analyzed data generated) are necessary to support comparable filings by such other Party with regulatory authorities in other jurisdictions, and such Party is legally and contractually able to provide such access. Each Party may cross-reference the regulatory filings of the other Party, to the extent allowed under applicable laws. FRESENIUS shall keep XCYTE reasonably informed on any filings and procedures with local Regulatory Agencies relating to Products. For the avoidance of doubt, FRESENIUS shall not file, or take any action related to filing, for Regulatory Approval in any country outside the Territory without the prior written consent of XCYTE, and XCYTE shall not file for Regulatory Approval

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

in any country in North America relating to the use of the Xcellerate™ Technology in the Field except in accordance with Section 3.4 hereof.

ARTICLE 13 – REPRESENTATIONS AND WARRANTIES.

13.1. **Representations and Warranties.**

(a) This Agreement has been duly executed and delivered by each Party and constitutes the valid and binding obligation of each Party, enforceable against such Party in accordance with its terms, except as enforceability may be limited by bankruptcy, fraudulent conveyance, insolvency, reorganization, moratorium or other laws relating to or affecting creditors' rights generally and by general equitable principles. The execution, delivery and performance of this Agreement has been duly authorized by all necessary action on the part of each Party, its officers and directors.

(b) The execution, delivery and performance of the Agreement by each Party does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it is bound, nor violate any law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it.

(c) XCYTE has not, and during the term of the Agreement will not, grant any right to any Third Party relating to the Xcellerate™ Technology, which would conflict with the rights granted to FRESENIUS hereunder.

(d) XCYTE represents and warrants that it has the right to grant the licenses granted herein.

(e) As of the Effective Date, XCYTE has no actual knowledge and no reason to believe that the use of Xcellerate™ Technology as contemplated by this Agreement infringes any Third Party intellectual property rights.

(f) As of the Effective Date, XCYTE has no actual knowledge and no reason to believe that any of the XCYTE Patents are invalid or unenforceable or the subject of an interference or cancellation proceeding (either actual or potentially by notification by a potential Third Party intending to file for such relief).

(g) XCYTE represents and warrants that XCYTE is not in material default, without opportunity to cure, with the contractual partners of the XCYTE In-Licenses.

(h) XCYTE represents and warrants that the XCYTE™ Dynabeads® are manufactured with the Specifications and in all material respects in accordance with applicable cGMP.

(i) FRESENIUS represents and warrants that it will comply with all applicable laws and regulations (A) in conducting the Research Program, Phase I/II Clinical Trial, any Additional Pre-pivotal Clinical Trials and Pivotal Trial, (B) in its use, directly or indirectly, of the Xcellerate™ Technology and (C) in any action or inaction related to regulatory submissions involving a Product.

13.2. **Performance by Affiliates**.

The Parties recognize that each may perform some or all of its obligations under this Agreement through Affiliates, provided, however, that each Party shall remain responsible and be guarantor of the performance by its Affiliates and shall cause its Affiliates to comply with the provisions of this Agreement in connection with such performance.

ARTICLE 14 – TERM AND TERMINATION.

14.1. **Term**.

Unless earlier terminated pursuant to this Article 14, the term of this Agreement shall commence on the Effective Date and shall remain in full force and effect until the expiration of the Royalty Term. If FRESENIUS agrees to license in any New Technology, the term of FRESENIUS' obligation shall extend until the later of (i) the last to expire Valid Patent Claim covering such New Technology, or (ii) **[*]** years after the First Commercial Sale of a Product derived from such New Technology in a respective country

14.2. **Termination by FRESENIUS**.

If (i) FRESENIUS determines in good faith that it cannot develop a commercially viable Product or (ii) FRESENIUS is required, without a reasonable alternative, by an applicable regulatory authority in the Territory to audit the manufacturing facility of the Xcyte™ Dynabeads®, and such manufacturer does not allow FRESENIUS or the applicable regulatory authority to perform such audit during normal business hours, then so long as FRESENIUS had provided to such manufacturer at least **[*]** days' advance written notice of its request to audit the facility, then FRESENIUS shall have the right at any time to terminate this Agreement by providing not less than **[*]** days prior notice to XCYTE of such termination.

14.3. **Termination by XCYTE upon Failure to Meet Milestone**.

If FRESENIUS does not meet the diligence obligations set forth in Section 5.3, then XCYTE may terminate this Agreement immediately without prior written notice.

14.4. **Termination for Cause**.

Either Party may terminate this Agreement for material breach by the other Party (the "Breaching Party") of any material provision of the Agreement, if the Breaching Party has not cured such breach within **[*]** days after notice thereof; provided, however, that neither Party shall be deemed to be in material breach of this Agreement for purposes of a termination hereunder during any period in which a good faith dispute between the Parties exists regarding performance of breach of its obligations hereunder. For the avoidance of doubt, it shall be deemed a breach of this Agreement if XCYTE terminates the XCYTE In-Licenses or if at least one of the licensors of the XCYTE In-Licenses effectively terminates the XCYTE In-Licenses.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

14.5. **Termination Upon Insolvency**.

Either Party may terminate this Agreement if, at any time, the other Party shall file in any court or agency pursuant to any statute or regulation of any state, country or jurisdiction, a petition in bankruptcy or insolvency or for reorganization or for an arrangement or for the appointment of a receiver or trustee of that Party or of its assets, or if such other Party proposes a written agreement of composition or extension of its debts, or if such other Party shall be served with an involuntary petition against it, filed in any insolvency proceeding, and such petition shall not be dismissed within **[*]** days after the filing thereof, or if such other Party shall propose or be a party to any dissolution or liquidation, or if such other Party shall make an assignment for the benefit of its creditors.

14.6. **Termination of XCYTE In-Licenses**. XCYTE shall not terminate or enter into modifications of the XCYTE In-Licenses if such modification would materially and adversely affect the rights of FRESENIUS hereunder without FRESENIUS' prior written consent. All rights and obligations under an XCYTE In-License sublicensed under this Agreement shall terminate upon **[*]** days prior written notice by XCYTE if FRESENIUS breaches any material provision of such XCYTE In-License Agreement and fails to cure such breach within such **[*]** day period; provided, however such cure period may be extended by consent of the Parties. All rights and obligations under an XCYTE In-License sublicensed under this Agreement shall terminate upon termination of such XCYTE In-License; subject to FRESENIUS' right, if any, under such XCYTE In-License to enter into a direct license with licensor upon the terms and conditions set forth in such XCYTE In-License.

14.7. **Effect of Expiration and Termination**.

14.7.1. Except where explicitly provided within this Agreement, termination of this Agreement for any reason, or expiration of this Agreement, with not affect any: (i) obligations, including payment of any royalties or other sums 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 provisions of Articles 9, 10, 11, 12, 16 and 21, and Sections 6.2, 7.2, 7.3 and 14.7, which shall survive the expiration or termination of the Agreement. Notwithstanding the foregoing, all licenses granted by XCYTE to FRESENIUS hereunder, including all Exclusive Licenses, will immediately terminate upon termination of this Agreement pursuant to Sections 14.2, 14.3, 14.4 or 14.5.

14.7.2 Upon termination of this Agreement, FRESENIUS shall cease to make, have made, use, import, sell and offer for sale all Products; terminate all sublicenses, and cause all sublicensees to cease making, having made, using, importing, selling and offering for sale all Products; and pay all monies owed to XCYTE under this Agreement. However, If FRESENIUS terminates this Agreement pursuant to Section 14.4 hereof because of a material breach of this Agreement by XCYTE, FRESENIUS shall have a period of **[*]** months to sell off its inventory of Product(s) existing on the date of termination of this Agreement and shall pay royalties in

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

accordance with this Agreement to XCYTE with respect to such Product(s) within **[*]** days following the expiration of such **[*]**-month period ("Sell Off Right").

14.7.3 In the event this Agreement is terminated by FRESENIUS under Section 14.2, then, upon request of XCYTE, the Parties shall negotiate in good faith a commercially reasonable license to XCYTE under the FRESENIUS Patents, FRESENIUS know-how and Regulatory Approvals or submissions, at royalty rates to be determined by good faith negotiations of the Parties at the time of such termination, taking into account factors including, but not limited to, the financial investment by FRESENIUS during the term of the Agreement, the relative contributions of the Parties to the pre-clinical and clinical development of, and the regulatory efforts relating to, the product or products subject to royalties, the degree of protection that the FRESENIUS Patents and FRESENIUS know-how afford against unlicensed competition, the potential market size for such product or products, and the then current "market rates" for royalties on licenses of similar scope for programs at a similar stage of development; provided, however, that in no event shall the rate of such royalties be more than the rates set forth in Section 6.1.

14.7.3. Upon the expiration of the Royalty Term for each Product pursuant to Section 14.1, XCYTE hereby grants FRESENIUS a royalty-free, perpetual, license in the Field within the Territory to use the Xcellerate™ Technology for that Product.

ARTICLE 15 – XCYTE BANKRUPTCY

If FRESENIUS elects not to terminate this Agreement pursuant to Section 14.5 upon XCYTE's bankruptcy, XCYTE, subject to applicable bankruptcy laws and regulations, shall not prohibit FRESENIUS from entering into supply agreements with Dynal, Inc., and Dynal, A.S.A, and Lonza Biologics, in order to maintain the supply of XCYTE™ Dynabeads® for FRESENIUS. In addition to any payments required under this Agreement, FRESENIUS shall pay to XCYTE a royalty of **[*]** percent (**[*]**%) upon the transfer price for such XCYTE™ Dynabeads®.

ARTICLE 16—INDEMNITY.

16.1. **Direct Indemnity**.

16.1.1. Each Party shall indemnify and hold harmless, and hereby forever releases and discharges the other Party from and against all claims, demands, liabilities, damages and expenses, including attorneys' fees and costs (collectively, the "Liabilities") arising out of (i) the breach of any material provision of this Agreement by the indemnifying Party (or the inaccuracy of any representation or warranty made by such Party in this Agreement), except to the extent such Liabilities resulted from the gross negligence, recklessness or willful misconduct of the other Party; or (ii) the gross negligence, recklessness or willful misconduct of the indemnifying Party.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

16.1.2. FRESENIUS shall indemnify and hold harmless, and hereby forever releases and discharges XCYTE from and against all Liabilities suffered or incurred arising out of any Third Party claims for personal injury, death or disability or any product recall to the extent caused by (a) the use, promotion, manufacture, sale, lease, consumption or advertisement of any Product or other exercise of its rights under this Agreement including, without limitation, amounts paid in settlement of claims, proceedings, or investigations; except in each case to the extent such Liabilities resulted from the gross negligence, recklessness or willful misconduct by XCYTE or the inaccuracy of any representation or warranty made by XCYTE in this Agreement, and agrees to bear all costs and expenses, including without limitation, reasonable attorney's fees incurred in connection with the defense or settlement of any such claim, proceeding or investigation as such costs and expenses are incurred in advance of judgment.

16.2. **Procedure**.

A Party (the "Indemnitee") that intends to claim indemnification under this Article 16 shall promptly provide notice to the other Party (the "Indemnitor") of any Liability or action in respect of which the Indemnitee intends to claim such indemnification, which notice shall include a reasonable identification of the alleged facts giving rise to such Liability, and the Indemnitor shall have the right to participate in, and, to the extent the Indemnitor so desires, jointly with any other Indemnitor similarly noticed, to assume the defense thereof with counsel selected by the Indemnitor; provided, however, that the Indemnitee shall have the right to retain its own counsel, with the fees and expenses to be paid by the Indemnitor, if representation of such Indemnitee by the counsel retained by the Indemnitor would be inappropriate due to actual or potential differing interests between such Indemnitee and any other Party represented by such counsel in such proceedings. Any settlement of a Liability for which any Indemnitee seeks to be reimbursed, indemnified, defended or held harmless under this Article 16 shall be subject to prior consent of such Indemnitee, such consent shall be withheld unreasonably.

ARTICLE 17- FORCE MAJEURE.

No Party (or any of its Affiliates) shall be held liable or responsible to the other Party (or any of its Affiliates) nor be deemed to have defaulted under or breached the Agreement for failure or delay in fulfilling or performing any term of the Agreement when such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party (or any of its Affiliates) including fire, floods, embargoes, war, acts of war (whether war be declared or not), insurrections, riots, civil commotions, acts of God or acts, or omissions or delays in acting by any governmental authority (collectively, "Events of Force Majeure"); provided, however, that the affected Party shall exert all reasonable efforts to eliminate, cure or overcome any such Event of Force Majeure and to resume performance of its covenants with all possible speed. Notwithstanding the foregoing, to the extent that an Event of Force Majeure continues for a period in excess of six (6) months, the affected Party shall promptly notify in writing the other Party of such Event of Force Majeure and within four (4) months of the other Party's receipt of such notice, the Parties agree to negotiate in good faith either (i) to resolve the Event of Force Majeure, if possible, (ii) to extend by mutual agreement the time period to resolve, eliminate,

cure or overcome such Event of Force Majeure, (iii) to amend this Agreement to the extent reasonably possible, or (iv) to terminate this Agreement.

ARTICLE 18 – ASSIGNMENT.

This Agreement may not be assigned or otherwise transferred, nor, except as expressly provided hereunder, may any right or obligations hereunder be assigned or transferred to any Third Party by either Party without the consent of the other Party, such consent not to be unreasonably withheld; provided, however, that FRESENIUS may assign this Agreement to EUFETS, and that either Party may, without such consent but with notification, assign this Agreement and its rights and obligations hereunder to any of its Affiliates or in connection with the transfer or sale of all or substantially all of its business, or in the event of its merger or consolidation (such merger or consolidation shall be hereinafter referred to as a "Change in Control"). Any permitted assignee shall assume all rights and obligations of its assignor under this Agreement; provided, however, that an acquiror of XCYTE in connection with a Change of Control shall not be obligated, but shall have the right, to disclose or offer to FRESENIUS pursuant to Section 3.3 any New Technologies owned or controlled by such acquiror prior to the Change of Control, or any New Technologies owned or controlled by acquiror or XCYTE after a Change of Control.

ARTICLE 19 – SEVERABILITY.

Each Party hereby agrees that it does not intend to violate any public policy, statutory or common laws, rules, regulations, treaty or decision of any government agency or executive body thereof of any country or community or association of countries. Should one or more provisions of this Agreement be or become invalid, the Parties hereto shall substitute, by mutual consent, valid provisions for such invalid provisions which valid provisions in their economic effect are sufficiently similar to the invalid provisions that it can be reasonably assumed that the Parties would have entered into this Agreement with such provisions.

In case such provisions cannot be agreed upon, the invalidity of one or several provisions of this Agreement shall not affect the validity of this Agreement as a whole, unless the invalid provisions are of such essential importance to this Agreement that it is to be reasonably assumed that the Parties would not have entered into this Agreement without the invalid provisions.

ARTICLE 20 – INSURANCE.

During the term of this Agreement and thereafter for the period of time required below, each Party shall maintain an ongoing basis comprehensive general liability insurance in the minimum amount of $[*] per occurrence and $[*] annual aggregate combined single limit for bodily injury and property damage liability; and commencing not later than 30 days prior to the first use in humans of the first potential Product and thereafter for the period of time required below, each Party shall obtain and maintain on an ongoing basis products liability insurance in the amount of at least $[*] per occurrence and annual aggregate combined single limit for bodily injury and property damage liability. All of such insurance coverage shall be maintained with an insurance company or companies having an A.M. Best rating of "A-" or better and an aggregate deductible not to exceed $[*] per occurrence.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Not later than the effective date of this Agreement with respect to the comprehensive general liability coverage, and not later than 30 days prior to the first use in humans of the first potential Product with respect to the product liability coverage, each Party shall provide to the other a certificate(s) evidencing all such required coverage hereunder. Thereafter the Parties shall maintain such insurance coverage without interruption during the term of this Agreement and for a period of at least five (5) years after the expiration or termination of the Agreement and shall provide certificates evidencing such insurance coverage without interruption on an annual basis (by no later than the annual renewal date for such coverage) during the period of time for which such coverage must be maintained.

ARTICLE 21 – MISCELLANEOUS.

21.1. **Notices**.

Any consent, notice or report required or permitted to be given or made under this Agreement by one of the Parties hereto to the other shall be in writing, delivered personally or by facsimile (and promptly confirmed by personal delivery, first class air mail or courier), first class air mail or courier, postage prepaid (where applicable), addressed to such other Party at its address indicated below, or to such other address as the addressee shall have last furnished in writing to the address or in accordance with this Section 21.1 and (except as otherwise provided in this Agreement) shall be effective upon receipt by the addressee.

If to Xcyte Therapies, Inc.:
1124 Columbia Street, Suite 130
Seattle, WA 98104
Attention: Chief Executive Officer & General Counsel

With copy to:
Venture Law Group
4750 Carillon Point
Kirkland, WA 98033
Attention: Sonya F. Erickson

If to FRESENIUS BIOTECH GMBH:
Else-Kröner-Straße 1
D-61352 Bad Homburg v. d. H.
Attention: Chief Executive Officer

With copy to:
FRESENIUS AG
Else-Kröner-Straße 1
D-61352 Bad Homburg v. d. H.
Attention: General Counsel

21.2. **Applicable Law**.

The Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, U.S.A., without regard to the conflict of law principles thereof.

21.3. **Dispute Resolution**.

The Parties agree that if any dispute or disagreement arises between FRESENIUS on the one hand and XCYTE on the other in respect of this Agreement, they shall follow the following procedure in an attempt to resolve the dispute or disagreement.

(a) The Party claiming that such a dispute exists shall give notice in writing ("Notice of Dispute") to the other Party of the nature of the dispute;

(b) Within fourteen (14) business days of receipt of a Notice of Dispute, a nominee or nominees of FRESENIUS and a nominee or nominees of XCYTE shall meet in person and exchange written summaries reflecting, in reasonable detail, the nature and extent of the dispute, and at this meeting they shall use their reasonable endeavors to resolve the dispute;

(c) If, within a further period of fourteen (14) business days, the dispute has not been resolved, the President of XCYTE and the President of FRESENIUS or their respective designees shall meet at a mutually agreed upon time and location for the purpose of resolving such dispute;

(d) If, within a further period of thirty (30) business days, the dispute has not been resolved or if, for any reason, the required meeting has not been held, then the same shall be submitted by the Parties to expedited arbitration with the International Chamber of Commerce ("ICC") in Paris, France, such arbitration to be conducted in the English language in accordance with the then-current commercial arbitration rules of the ICC except as otherwise provided herein. Each Party shall choose one (1) arbitrator within twenty (20) days of receipt of notice of the intent to arbitrate and the two (2) arbitrators so selected shall choose a third arbitrator by mutual agreement within twenty (20) days of the selection of the initial two (2) arbitrators; provided that if any of the arbitrators are not selected within period of time stated herein or any extension of time that is mutually agreed upon, the ITI shall make such appointment within twenty (20) days of such failure. The costs of the arbitration shall be shared equally by the Parties; provided that the judgment rendered by the arbitrator shall include reimbursement of the prevailing parties' costs of arbitration, reasonable attorneys' fees and reasonable costs for expert and other witnesses. Nothing in this Agreement shall be deemed as preventing either Party from seeking injunctive relief (or any other provisional remedy). If the issues in dispute involve scientific, technical or commercial matters, any arbitrator chosen hereunder shall have educational training and/or industry experience sufficient to demonstrate a reasonable level of relevant scientific, medical and industry knowledge.

(e) In the event of a dispute regarding any payments owing under this Agreement, all undisputed amounts shall be paid promptly when due and the balance, if any, promptly after resolution of the dispute.

21.4. **Entire Agreement**.

This Agreement contains the entire understanding of the Parties with respect to the subject matter hereof. All express or implied agreements and understandings, either oral or written, heretofore made are expressly superseded by this Agreement. This Agreement may be amended, or any term hereof modified, only by a written instrument duly executed by both Parties hereto.

21.5. **Independent Contractors**.

XCYTE and FRESENIUS each acknowledge that they shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency. Neither XCYTE nor FRESENIUS shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other Party, without the prior consent of the other Party to do so.

21.6. **Affiliates**.

Each Party shall cause its respective Affiliates to comply fully with the provisions of this Agreement to the extent such provisions specifically relate to, or are intended to specifically relate to, such Affiliates, as though such Affiliates were expressly named as joint obligors hereunder.

21.7. **Waiver**.

The waiver by either Party hereto of any right hereunder or the failure to perform or of a breach by the other Party shall not be deemed a waiver of any other right hereunder or of any other breach or failure by said other Party whether of a similar nature or otherwise.

21.8. **Counterparts**.

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[*Signature page follows*]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first set forth above.

XCYTE THERAPIES, INC.

By: /s/ Ronald Jay Berenson

Name: Ronald Jay Berenson, MD

Title: CEO and President

FRESENIUS BIOTECHGmbH

By: /s/ Thomas G. Gottwald

Name: Thomas B. Gottwald, M.D., Ph.D.

Title: President

By: /s/ Wolfgang Hockh

Name: Wolfgang Hockh, Ph.D.

Title: Executive Vice President

[SIGNATURE PAGE TO COLLABORATION AGREEMENT]

EXHIBIT A

XCYTE PATENTS

I. Existing Xcellerate™ Technology [including In-License Patents]

Patent No.	Description	Licensor
PCT/US89/05304 (EP445228B1)		
PCT/US94/06255 (EP0700430A1)		
PCT/US94/13782 (EP764203A1)		
PCT/US96/06200 (EP824594A1)		
6,352,694		
08/435,816		
08/592,711		
08/475,136		
5,858,358		
09/183,055		
09/350,202		
09/553,865		
09/349,915		
5,883,223		
09/794,230		
PCT/US01/06139		
09/960,264		
10/133,236		
10/187,467		
[*]		
PCT/US02/28161		

II. New Technologies

Patent No.	Description	Licensor	Applicable Third-Party Royalty Obligation

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT B

CLINICAL ENDPOINTS

Patient Population

Male and female patients between 18 and 65 years of age who are infected with HIV-1 and have viral load over **[*]** copies/ml on **[*]** different occasions during HAART treatment for more than **[*]** months. Patients who will participate must have experience with all 3 classes of antiretrovirals and have shown resistance and/or intolerabilities against at least one of the compounds of each class. **[*]** must be under **[*]** per µl (>**[*]** per µl). Patients must not have any **[*]**.

1) Manufacturing related endpoints

- feasibility of the manufacturing process (**[*]** of > **[*]** + **[*]**)

- final cell product sufficient to meet the requirements of the Paul Ehrlich Institute for clinical trials of somatic cell and gene therapy products

shall apply for **[*]** patients treated in the Phase I/II Clinical Trial who were selected from a clinically reasonable number of patients screened/evaluated for this clinical trial.

2) Safety and toxicity endpoints

- no Grade IV (NCI Clinical Toxicity Criteria) treatment related toxicity (as measured by physical examination, vital signs, laboratory safety tests, Karnofsky performance score) **[*]** weeks following infusion of gene modified T cells

shall apply for **[*]** patients treated in the Phase I/II Clinical Trial who were selected from a clinically reasonable number of patients screened/evaluated for this clinical trial.

3) Efficacy endpoints

[*] to be quantified in **[*]**. In the case, that no **[*]** are available, **[*]** are to be quantified in the peripheral blood.

Any one of the following three endpoints:
- **[*]** fold enrichment of gene modified T cells **[*]** weeks after treatment **[*]**, or

- proportion of **[*]** > **[*]**, **[*]** weeks after treatment, or

- **[*]** of **[*]** over the course of the clinical trial.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

In addition, the following endpoint must also be met:

-**[*]** from **[*]** following treatment.

Efficacy endpoints shall apply for at least **[*]** out of **[*]** patients treated in Phase I/II Clinical Trial.

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT C

XCYTE IN-LICENSE AGREEMENTS

(1) License and Supply Agreement dated October 15, 1999 by and between XCYTE and Diaclone S.A., as amended

(2) Non-Exclusive License Agreement dated October 20, 1999 by and between XCYTE and Fred Hutchinson Cancer Research Center, as amended

(3) License Agreement dated July 8, 1998 by and between XCYTE and Genetics Institute, L.L.C. ("GI"), as amended, including the exhibits:

(A) License Agreement between GI and the Secretary of the Navy dated December 10, 1996, as amended,

(B) License Agreement dated May 28, 1992 between GI and the University of Michigan, as amended,

(C) License Agreement dated July 20, 1993 between GI (as successor-in-interest to Repligen Corporation) and Dana Farber Cancer Institute, as amended.

EXHIBIT D

SPECIFICATIONS

Xcyte™ Dynabeads®
Volume: 10 ml
Storage: Store at 2-8°C
Storage buffer: [*]

QUALITY CONTROL SPECIFICATIONS:

Bacterial Endotoxins Test:	"Gel Cloth Method" (LAL) [*] Bacterial Endotoxins Test, Criterion: Less than or equal to [*]
Sterility Test	"Direct Transfer Method" [*] Sterility Tests Criterion: No growth
Antibody leakage	Conc. of antibody in buffer Criteria: IgG2a (XR-CD28): Report value, for info. only IgG2b (XR-CD3): Report value, for info. only
Antibody binding	Conc. of antibody on particle Criteria: IgG2a (XR-CD28): [*] IgG2b (XR-CD3): [*]
Beads per ml	Counted by Coulter Counter Z2 Criterion: [*]
pH—measurement	Criterion: pH [*]
Visual inspection	Criterion: Clear suspension, brown particles
Xcyte; Functional assay (ELISA Spin down)	Criteria: IgG2a (XR-CD28): [*] IgG2b (XR-CD3): [*]

[*] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit 10.50

XCYTE THERAPIES, INC.

EMPLOYMENT AGREEMENT

This Employment Agreement (the "Agreement") is dated as of January 15, 2004 (the "Effective Date"), by and between **Robert Lawrence Kirkman, MD** ("Employee") and **Xcyte Therapies, Inc.**, a Delaware corporation (the "Company"), and sets forth the terms and conditions with respect to Employee's employment with the Company as of and after the date of this Agreement.

1. **Duties.**

(a) **Position Responsibilities**. Employee shall be employed as Chief Business Officer and Vice President of Company commencing on January 21, 2004 (the "Start Date"). The duties and responsibilities of Employee shall include the duties and responsibilities as attached hereto as *Attachment A* and such other duties and responsibilities as the Chief Executive Officer may from time to time reasonably assign to Employee, in all cases to be consistent with Employee's corporate office and position.

(b) **Obligations to the Company**. Employee agrees to the best of his ability and experience that he will at all times faithfully perform all of the duties and obligations required of and from Employee, consistent and commensurate with Employee's position, pursuant to the terms hereof. During the term of Employee's employment relationship with Company, Employee will not directly or indirectly engage or participate in any business that is competitive in any manner with the business of Company, as a director, officer, advisor or contractor or in any other capacity with respect to any such competitive business. Nothing in this Agreement will prevent Employee from (i) making personal investments in, and sitting on the board of directors or board of advisors of, businesses that are not competitive with the business of Company, or (ii) accepting speaking or presentation engagements in exchange for honoraria or from serving on boards of charitable organizations, provided that such activities listed in (i) and (ii) do not materially interfere with Employee's obligations to Company as described above. Nothing in this Agreement will require Employee to divest of passive investments made prior to this Agreement in a business that is or may be competitive with the business of the Company or from making similar investments in the future provided that Employee is no longer employed by the Company. Employee will comply with and be bound by Company's operating policies, procedures and practices from time to time in effect during the term of Employee's employment.

2. **Confidentiality Agreement**. On or prior to the Start Date, Employee shall sign a Proprietary Information and Invention Assignment Agreement (the "Confidentiality Agreement") substantially in the form attached hereto as *Attachment B*. Employee hereby represents and warrants to Company that he has complied with all obligations under the Confidentiality Agreement since the commencement of discussions with the Company regarding employment and agrees to continue to abide by the terms of the Confidentiality Agreement and further agrees that the provisions of the Confidentiality Agreement shall survive any termination of this Agreement or of Employee's employment relationship with Company.

3. **Compensation**.

(a) **Salary**. Employee shall receive a monthly salary of $20,000.00 (subject to applicable withholding taxes), which is equivalent to $240,000.00 on an annualized basis (the "Base Salary"). Employee's monthly salary will be payable pursuant to the Company's normal payroll practices.

(b) **Signing Bonus**. Employee shall receive a signing bonus in the amount of $85,000.00 (subject to applicable withholding taxes) to be paid as soon as practicable following Employee's Start Date. Any bonus received by Employee pursuant to this Section will be reported as taxable income to Employee in the year received and may be subject to additional taxes as required by applicable tax law. Employee will not be eligible for any tax gross up payments from the Company in connection with this bonus.

(c) **Stock Options**. The Company will recommend to the Board of Directors of the Company that, at the next Board meeting, following the Employee's Start Date, Employee be granted an option to purchase 400,000 shares of the Company's Common Stock ("Shares") with an exercise price equal to the fair market value of the Shares on the date of the grant and a vesting schedule as follows: subject to Employee's continued active full-time employment with the Company, 25% of the total Shares shall vest on the date that is the one year anniversary of the Vesting Commencement Date (defined by reference to the Employee's Start Date) and an additional 1/48th of the total Shares shall vest monthly thereafter until all Shares have vested (total vesting in 48 months). The option will be an incentive stock option to the maximum extent allowed by the Internal Revenue Code of 1986, as amended, and will be subject to the terms of the Company's Amended and Restated 1996 Stock Option Plan and the Stock Option Agreement between Employee and the Company.

(d) **Relocation Assistance**. Employee will receive reimbursement for the following expenses reasonably related to the relocation of Employee and Employee's immediate family to the Seattle, Washington metropolitan area in connection with his employment at the Company: movement of household goods, storage of those goods, movement of vehicles, and temporary housing costs. Notwithstanding anything to the contrary, Employee's total reimbursement for any and all relocation expenses may not exceed $15,000 and will require receipts or other supporting documentation prior to reimbursement by the Company.

(e) **Success-Based Option Grants**. Employee will be eligible to receive additional grants of stock options or purchase rights from time to time in the future, based on the success and/or consummation of business deals or other goals achieved by Employee, as the Board of Directors may deem appropriate in their discretion. The stock options shall also be subject to such terms and conditions as the Board of Directors shall determine as of the date of any such grant.

4. **Benefits**.

(a) **General Benefits**. Employee will be eligible to participate in the Company's employee benefit plans of general application in accordance with the rules

established for individual participation in any such plan and under applicable law. Employee will be eligible for such other benefits as the Company generally provides to its other employees of comparable position.

(b) **Vacation**. Employee will be entitled to 12 days paid vacation per calendar year, pro-rated for the remainder of this calendar year, in each year of service. Vacation accrues according to the following schedule: 8.00 hours per month in each year of service, with such accrual capped at 180 hours. Vacation may not be taken before it is accrued. In addition, Employee will be entitled to take up to 10 days sick leave per calendar year, pro-rated for the remainder of this calendar year.

5. **Term; At-Will Employment**. The employment of Employee under this Agreement shall be for an unspecified term. The Company and Employee acknowledge and agree that Employee's employment is and shall continue to be at-will, as defined under applicable law, and that Employee's employment with the Company may be terminated by either party at any time for any or no reason, and with or without notice. If Employee's employment terminates for any reason, Employee shall not be entitled to any payments, benefits, damages award or compensation other than as provided in this Agreement.

6. **Separation Benefits**. Employee shall be entitled to receive separation benefits upon termination of employment only as set forth in this Section 6; provided, however, that in the event Employee is entitled to any severance pay under a Company-sponsored severance pay plan, any such severance pay to which Employee is entitled under such severance pay plan shall reduce the amount of severance pay to which Employee is entitled pursuant to this Section 6. In all cases, upon termination of employment Employee will receive payment for all salary and unused vacation accrued as of the date of Employee's termination of employment and Employee's benefits will be continued under the Company's then existing benefit plans and policies in accordance with such plans and policies in effect on the date of termination and in accordance with applicable law or as provided for herein.

(a) **Voluntary Resignation**. If Employee voluntarily elects to terminate Employee's employment with the Company, Employee shall not be entitled to any severance benefits.

(b) **Termination for Cause**. If the Company or its successor terminates Employee's employment for Cause, then Employee shall not be entitled to receive any separation benefits.

(c) **Involuntary Termination.** If Employee's employment is terminated by the Company or its successor under circumstances that constitute an Involuntary Termination prior to the first anniversary of Employee's Start Date, provided Employee signs a general release of claims in the form attached hereto as *Attachment C*, Employee shall receive (i) continued payment of his base salary until the date that is six (6) months from Employee's Involuntary Termination, subject to applicable withholding taxes, and paid in accordance with the Company's normal payroll schedule commencing after Employee's execution of the general release of claims, and (ii) reimbursement for his expenses incurred in continuing his medical

insurance for himself and his dependents under the Consolidated Omnibus Budget Reconciliation Act of 1984, as amended ("COBRA"), as applicable, for a period of six (6) months following the commencement of such COBRA continuation coverage, provided Employee makes a timely election for and continues to be eligible for such continued coverage.

(d) **Termination by Reason of Death or Disability**. In the event that Employee's employment with the Company terminates as a result of Employee's death or his inability to perform the essential functions of his position with or without reasonable accommodation on account of a mental or physical disability, Employee or Employee's estate or representative, as applicable, will receive all salary and unpaid vacation accrued as of the date of Employee's employment termination and any other benefits payable under the Company's then existing benefit plans and policies in accordance with such plans and policies in effect on the date of termination and in accordance with applicable law.

(e) **Definition of "Involuntary Termination"**. For purposes of this Agreement, Employee shall be considered to have been terminated under circumstances that constitute Involuntary Termination if he is terminated by the Company or its successor without Cause (other than on account of death or disability).

(f) **Definition of "Cause"**. For purposes of this Agreement, "Cause" for Employee's termination will exist at any time after the happening of one or more of the following events:

(i) Employee's failure to cure, within 30 days after written notice thereof from the Company, his failure to substantially perform his duties hereunder or gross negligence in the performance thereof, or failure to follow Company policy as set forth from time to time or to follow the legal directives of the Company's Chief Executive Officer, so long as such directives are not inconsistent with the Employee's position and duties and this Agreement;

(ii) Employee's act of fraud or embezzlement, or of dishonesty or other misconduct that materially damages the Company, including conviction of a felony;

(iii) Employee's incurable willful breach of any material provision of the Confidentiality Agreement (as defined in Section 2 above), including without limitation, Employee's theft or other misappropriation of the Company's proprietary information.

7. **Conflicts**. Employee represents that his or his performance of all the terms of this Agreement will not breach any other agreement to which Employee is a party. Employee has not, and will not during the term of this Agreement, enter into any oral or written agreement in conflict with any of the provisions of this Agreement.

8. **Successors and Assigns**. The rights and obligations under this Agreement shall benefit and be binding on any successor and/or assign of the Company, and the Company shall cause such successor and/or assign to agree expressly to perform the obligations under this Agreement in the same manner and to the same extent as the Company would be required to perform such obligations in the absence of a succession. The terms of this Agreement and all of

Employee's rights hereunder shall inure to the benefit of, and be enforceable by, Employee's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees. Employee's obligations under this Agreement may not be assigned.

9. **Miscellaneous Provisions**.

(a) **No Duty to Mitigate**. Employee shall not be required to mitigate the amount of any payment contemplated by this Agreement (whether by seeking new employment or in any other manner), nor, except as otherwise provided in this Agreement, shall any such payment be reduced by any earnings that Employee may receive from any other source.

(b) **Amendments and Waivers**. Any term of this Agreement may be amended or waived only with the written consent of the parties.

(c) **Sole Agreement**. This Agreement, including any Attachments hereto, constitutes the sole agreement of the parties and supersedes all oral negotiations and prior writings with respect to the subject matter hereof.

(d) **Notices**. Any notice required or permitted by this Agreement shall be in writing and shall be deemed sufficient upon receipt, when delivered personally or by a nationally-recognized delivery service (such as Federal Express or UPS), or 48 hours after being deposited in the U.S. mail as certified or registered mail with postage prepaid, if such notice is addressed to the party to be notified at such party's address as set forth below or as subsequently modified by written notice.

(e) **Choice of Law**. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of Washington, without giving effect to the principles of conflict of laws.

(f) **Severability**. If one or more provisions of this Agreement are held to be unenforceable under applicable law, the parties agree to renegotiate such provision in good faith. In the event that the parties cannot reach a mutually agreeable and enforceable replacement for such provision, then (i) such provision shall be excluded from this Agreement, (ii) the balance of the Agreement shall be interpreted as if such provision were so excluded and (iii) the balance of the Agreement shall be enforceable in accordance with its terms.

(g) **Counterparts**. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together will constitute one and the same instrument.

(h) **Advice of Counsel**. EACH PARTY TO THIS AGREEMENT ACKNOWLEDGES THAT, IN EXECUTING THIS AGREEMENT, SUCH PARTY HAS HAD THE OPPORTUNITY TO SEEK THE ADVICE OF INDEPENDENT LEGAL COUNSEL, AND HAS READ AND UNDERSTOOD ALL OF THE TERMS AND PROVISIONS OF THIS AGREEMENT. THIS AGREEMENT SHALL NOT BE CONSTRUED AGAINST ANY PARTY BY REASON OF THE DRAFTING OR PREPARATION HEREOF.

The parties have executed this Employment Agreement as of the date first written above.

XCYTE THERAPIES, INC.

By: /s/ RONALD JAY BERENSON

Title: CEO & President

Address: 1124 Columbia Street, Suite 130

Seattle, Washington 98104

ROBERT LAWRENCE KIRKMAN, MD

Signature: /s/ ROBERT L. KIRKMAN

Address: 104 Loma Road

San Carlos, CA 94070

ATTACHMENT A to Employment Agreement

XCYTE THERAPIES, INC.
POSITION DESCRIPTION

Position Title: Chief Business Officer and Vice President
Position Status: Full-time; Exempt
Reports to: President, Chief Executive Officer

This organization believes that each employee makes a significant contribution to our success. That contribution should not be limited by the assigned responsibilities. Therefore, this position description is designed to outline primary duties, qualifications and job scope, but not limit the incumbent nor the organization to just the work identified

Primary Responsibilities:

The Chief Business Officer position is responsible for leading the evolution of the company from a research and product development focus to a balanced commercial focus. The position is responsible for providing the commercial, strategic and operating leadership and ensuring the transition of the company to a commercially sustained organization. As a member of the Executive Committee, refine and formulate current and long-range company strategy, business objectives, policies and budgets. With the President and Chief Executive Officer co-lead external communications in the areas of fund raising, investor relations and strategic alliances.

The Chief Business Officer has direct overall responsibility for developing the commercialization strategy for the company's products. This includes market analysis, reimbursement, pricing and all other issues related to introducing products into the market. This will also include an evaluation of the scientific, medical, development, manufacturing and intellectual property issues related to the commercialization of the product. The position will be responsible for participating in the internal product planning and review process and providing commercial decisions and market requirements regarding the direction and appropriateness of each product development program. This individual will also be directly responsible for identifying potential partnerships with biopharmaceutical companies, which include disease-specific, geographic or combination products. This individual will take the lead role in structuring, negotiating and securing agreements with these partners. The Chief Business Officer will also be responsible for helping to identify and evaluate new business opportunities for Xcyte Therapies. These opportunities may include products or technologies that come from either academic institutions or other companies. The Chief Business Officer will be responsible for overseeing the analysis of these opportunities, which requires evaluation of their scientific, medical, development and intellectual property issues. The individual is directly responsible for performing the marketing and business analyses for these opportunities. In addition, the individual is responsible for helping to identify key business areas for the company and how to implement business arrangements in these areas. The Chief Business Officer plays the key role in structuring, negotiating and securing licenses and agreements.

ATTACHMENT B to Employment Agreement

PROPRIETARY INFORMATION AND INVENTIONS AGREEMENT

XCYTE THERAPIES, INC.

PROPRIETARY INFORMATION AND INVENTIONS AGREEMENT

In exchange for my becoming employed (or my employment being continued), or retained as a consultant (or my consulting relationship being continued, by Xcyte Therapies, Inc. or its subsidiaries, affiliates, or successors (collectively, the "Company"), and for any cash and equity compensation for my services, I hereby agree as follows:

1. **Duties**. I will perform for the Company such duties as may be designated by the Company from time to time. During my period of employment or consulting relationship with the Company, I will devote my best efforts to the interests of the Company and will not engage in any activities detrimental to the best interests of the Company without the prior written consent of the Company.

2. **Confidentiality Obligation**. I understand and agree that all Proprietary Information (as defined below) shall be the sole property of the Company and its assigns, including all trade secrets, patents, copyrights and other rights in connection therewith. I hereby assign to the Company any rights I may acquire in such Proprietary Information. I will hold in confidence and not directly or indirectly to use or disclose, both during my employment by or consulting relationship with the Company and for a period of three (3) years after its termination (irrespective of the reason for such termination), any Proprietary Information I obtain or create during the period of my employment or consulting relationship, whether or not during working hours, except to the extent authorized by the Company, until such Proprietary Information becomes generally known. I agree not to make copies of such Proprietary Information except as authorized by the Company. Upon termination of my employment or consulting relationship or upon an earlier request of the Company, I will return or deliver to the Company all tangible forms of such Proprietary Information in my possession or control, including but not limited to drawings, specifications, documents, records, devices, models or any other material and copies or reproductions thereof.

3. **Ownership of Physical Property**. All document, apparatus, equipment and other physical property in any form, whether or not pertaining to Proprietary Information, furnished to me by the Company or produced by me or others in connection with my employment or consulting relationship shall be and remain the sole property of the Company. I shall return to the Company all such documents, materials and property as and when requested by the Company, except only (i) my personal copies of records relating to my compensation; (ii) if applicable, my personal copies of any materials evidencing shares of the Company's capital stock purchased by me and/or options to purchase shares of the Company's capital stock granted to me; (iii) my copy of this Agreement and (iv) my personal property and personal documents I bring with me to the Company and any personal correspondence and personal materials that I accumulate and keep at my office during my employment (my "Personal Documents"). Even if the Company does not so request, I shall return all such documents, materials and property upon termination of my employment or consulting relationship, and, except for my Personal Documents, I will not take with me any such documents, material or property or any reproduction thereof upon such termination.

4. **Assignment of Inventions.**

(a) Without further compensation, I hereby agree promptly to disclose to the Company, all Inventions (as defined below) which I may solely or jointly develop or reduce to practice during the period of my employment or consulting relationship with the Company which (i) pertain to any line of business activity of the Company, (ii) are aided by the use of time, material or facilities of the Company, whether or not during working hours or (iii) relate to any of my work during the period of my employment or consulting relationship with the Company, whether or not during normal working hours ("Company Inventions"). During the term of my employment or consultancy, all Company Inventions that I conceive,

reduce to practice, develop or have developed (in whole or in part, either alone or jointly with others) shall be the sole property of the Company and its assigns to the maximum extent permitted by law (and to the fullest extent permitted by law shall be deemed "works made for hire"), and the Company and its assigns shall be the sole owner of all patents, copyrights, trademarks, trade secrets and other rights in connection therewith. I hereby assign to the Company any rights that I may have or acquire in such Company Inventions.

(b) I attach hereto as Exhibit A, a complete list of all Inventions, if any, made by me prior to my employment or consulting relationship with the Company that are relevant to the Company's business, and I represent and warrant that such list is complete. If no such list is attached to this Agreement, I represent that I have no such Inventions at the time of signing this Agreement. If in the course of my employment or consultancy (as the case may be) with the Company, I use or incorporate into a product or process an Invention not covered by Section 4(a) of this Agreement in which I have an interest, the Company is hereby granted a nonexclusive, fully paid-up, royalty-free, perpetual, worldwide license of my interest to use and sublicense such Invention without restriction of any kind.

NOTICE REQUIRED BY REVISED CODE OF WASHINGTON 49.44.140:

Any assignment of Inventions required by this Agreement does not apply to an Invention for which no equipment, supplies, facility or trade secret information of the Company was used and which was developed entirely on the employee's own time, unless (a) the Invention relates (i) directly to the business of the Company or (ii) to the Company's actual or demonstrably anticipated research or development or (b) the Invention results from any work performed by the employee for the Company.

5. **Further Assistance; Power of Attorney**. I agree to perform, during and after my employment or consulting relationship, all acts deemed necessary or desirable by the Company to permit and assist it, at its expense, in obtaining and enforcing the full benefits, enjoyment, rights and title throughout the world in the Inventions assigned to the Company as set forth in Section 4 above. Such acts may include, but are not limited to, execution of documents and assistance or cooperation in legal proceedings. I hereby irrevocably designate the Company and its duly authorized officers and agents as my agent and attorney-in fact, to execute and file on my behalf any such applications and to do all other lawful acts to further the prosecution and issuance of patents, copyright and mask work registrations related to such Inventions. This power of attorney shall not be affected by my subsequent incapacity.

6. **Inventions**. As used in this Agreement, the term "Inventions" means discoveries, developments, concepts, designs, ideas, know-how, improvements, inventions, trade secrets and/or original works of authorship, whether or not patentable, copyrightable or otherwise legally protectable. This includes, but is not limited to, any new product, machine, article of manufacture, biological material, method, procedure, process, technique, use, equipment, device, apparatus, system, compound, formulation, composition of matter, design or configuration of any kind, or any improvement thereon.

7. **Proprietary Information**. As used in this Agreement, the term "Proprietary Information" means information or physical material not generally known or available outside the Company or information or physical material entrusted to the Company by third parties. This includes, but is not limited to, Inventions, confidential knowledge, copyrights, product ideas, techniques, processes, formulas, object codes, biological materials, mask works and/or any other information of any type relating to documentation, laboratory notebooks, data, schematics, algorithms, flow charts, mechanisms, research, manufacture, improvements, assembly, installation, marketing, forecasts, sales, pricing, customers, the salaries, duties, qualifications, performance levels and terms of compensation of other employees, and/or cost or other financial data concerning any of the foregoing or the Company and its operations. Proprietary Information may be contained in material such as drawings, samples, procedures, specifications, reports, studies,

customer or supplier lists, budgets, cost or price lists, compilations or computer programs, or may be in the nature of unwritten knowledge or know-how.

8. **Solicitation of Employees, Consultants and Other Parties**. During the term of my employment or consulting relationship with the Company, and for a period of one (1) year following the termination of my relationship with the Company for any reason, I shall not directly or indirectly solicit, induce, recruit or encourage any of the Company's employees or consultants to terminate their relationship with the Company, or attempt any of the foregoing, either for myself or any other person or entity. For a period of one (1) year following termination of my relationship with the Company for any reason, I shall not solicit any licensor to or customer of the Company or licensee of the Company's products, that are known to me, with respect to any business, products or services that are competitive to the products or services offered by the Company or under development as of the date of termination of my relationship with the Company.

9. **Noncompetition**. During the term of my employment or consulting relationship with the Company and for one (1) year following the termination of my relationship with the Company for any reason, I will not, without the Company's prior written consent, directly or indirectly work on any products or services that are competitive with products or services (a) being commercially developed or exploited by the Company during my employment or consultancy and (b) on which I worked or about which I learned Proprietary Information during my employment or consultancy with the Company.

10. **No Conflicts**. I represent that my performance of all the terms of this Agreement as an employee of or consultant to the Company does not and will not breach any agreement to keep in confidence proprietary information, knowledge or data acquired by me in confidence or in trust prior to my becoming an employee or consultant of the Company, and I will not disclose to the Company, or induce the Company to use, any confidential or proprietary information or material belonging to any previous employer or others. I agree not to enter into any written or oral agreement that conflicts with the provisions of this Agreement.

11. **No Interference**. I certify that, to the best of my information and belief, I am not a party to any other agreement which will interfere with my full compliance with this Agreement.

12. **Effects of Agreement**. This Agreement (a) shall survive for a period of five (5) years beyond the termination of my employment by or consulting relationship with the Company, (b) inures to the benefit of successors and assigns of the Company and (c) is binding upon my heirs and legal representatives.

13. **At-Will Relationship**. I understand and acknowledge that my employment or consulting relationship with the Company is and shall continue to be at-will, as defined under applicable law, meaning that either I or the Company may terminate the relationship at any time for any reason or no reason, without further obligation or liability.

14. **Injunctive Relief**. I acknowledge that violation of this Agreement by me may cause irreparable injury to the Company, and I agree that the Company will be entitled to seek extraordinary relief in court, including, but not limited to, temporary restraining orders, preliminary injunctions and permanent injunctions without the necessity of posting a bond or other security and without prejudice to any other rights and remedies that the Company may have for a breach of this Agreement.

15. **Miscellaneous**. This Agreement supersedes any oral, written or other communications or agreements concerning the subject matter of this Agreement, and may be amended or waived only by a written instrument signed by me and the Chief Executive Officer of the Company. This Agreement shall be governed by the laws of the State of Washington applicable to contracts entered into and performed entirely within the State of Washington, without giving effect to principles of conflict of laws. If any provision of this Agreement is held to be unenforceable under applicable law, then such provision shall be excluded from this Agreement only to the extent unenforceable, and the remainder of such provision and of this Agreement shall be enforceable in accordance with its terms.

16. **Acknowledgment**. I certify and acknowledge that I have carefully read all of the provisions of this Agreement and that I understand and will fully and faithfully comply with such provisions.

XCYTE THERAPIES, INC.

By: /s/ RONALD JAY BERENSON

Title: CEO & President

Dated: 1/15, 2004

EMPLOYEE:

By: /s/ ROBERT L. KIRKMAN

Robert Lawrence Kirkman, MD

(print name)

Dated: 1/16, 2004

Exhibit A

Xcyte Therapies, Inc.
1124 Columbia Street, Suite 130
Seattle, Washington 98104

Ladies and Gentlemen:

1. The following is a complete list of all Inventions relevant to the subject matter of my employment by the Company that have been made or conceived or first reduced to practice by me, alone or jointly with others or which has become known to me prior to my employment by the Company. I represent that such list is complete.

NONE

2. I propose to bring to my employment or consultancy the following materials and documents of a former employer:

ü No materials or documents.

____ See below:

By: /s/ ROBERT L. KIRKMAN

Robert Lawrence Kirkman, MD

(Print Name)

ATTACHMENT C to Employment Agreement

GENERAL RELEASE OF CLAIMS

This General Release of Claims is made by and between _____ ("Employee") and **Xcyte Therapies, Inc.**, a Delaware corporation (the "Company").

Whereas, in consideration for and contingent upon Employee's release of claims as set forth below, the Company has agreed to provide certain separation benefits to Employee in connection with his termination of employment as set forth in the Employment Agreement between Employee and the Company dated _____(the "Separation Benefits"); and

Whereas, Employee acknowledges and agrees that he is not entitled to any severance payment or separation benefits from the Company other than the Separation Benefits and that he is entitled to the Separation Benefits only upon the Release Effective Date of this General Release of Claims; and

Whereas, Employee desires to mutually release the Company and related parties from claims as set forth below;

Employee agrees that the Separation Benefits represents settlement in full of all outstanding obligations owed to Employee by the Company with respect to Employee's employment relationship with the Company and the termination of such relationship. Employee, on behalf of himself and his heirs, executors, representatives, agents, attorneys, successors and assigns, hereby fully and forever releases the Company and its officers, directors, employees, shareholders, agents, attorneys, subscribers, investors, affiliates, predecessors, successors and assigns (hereinafter, "Xcyte Therapies") from any claim, duty, obligation or cause of action relating to any matters of any kind, whether known or unknown, suspected or unsuspected, that he may possess arising from any omissions, acts or facts that have occurred up until and including the date Employee signs this Agreement including, without limitation:

(a) any and all claims relating to or arising from Employee's employment with the Company or its successor and termination of that employment;

(b) any and all claims under Title VII of the Civil Rights Act of 1964, as amended, the Fair Labor Standards Act, the Equal Pay Act of 1963, the Americans With Disabilities Act, the Civil Rights Act of 1991, and Chapter 49.60 of the Revised Code of Washington or any other state and federal laws and regulations relating to employment or employment discrimination;

(c) any and all claims for wrongful termination of employment, breach of contract, breach of a covenant of good faith and fair dealing, violation of public policy, misrepresentation, emotional distress, interference with contract or prospective economic advantage, and defamation;

(d) any and all claims relating to, or arising from, Employee's right to purchase, or actual purchase of shares of stock of the Company;

(e) any and all claims, including, but not limited to, the Employee Retirement Income Security Act of 1974, as amended ("ERISA") related to severance benefits; and

(f) any and all claims for attorney's fees and costs.

Employee and the Company agree that the release set forth herein shall be and remain in effect in all respects as a complete and general release as to the matters released. This release does not extend to Employee's right to vested benefits (other than severance pay) under any Company-sponsored benefit plan covered by ERISA.

Employee agree that he will not assist, encourage, institute or cause to be instituted the filing of any administrative charge or legal proceeding against the Company relating to employment discrimination.

Employee and the Company agree that nothing contained in this Release shall constitute or be treated as an admission of wrongdoing by Employee or the Company.

Employee agrees that at all times in the future he will continue to be bound by the terms and conditions set forth in the Proprietary Information and Invention Assignment Agreement between Employee and the Company executed in connection with the commencement and continuation of his employment, dated _____ , 200__ (the "Confidentiality Agreement").

If Employee is forty (40) years of age or older as of the Separation Date, Employee acknowledges that he is knowingly and voluntarily waiving and releasing any rights he may have under the federal Age Discrimination in Employment Act of 1967, as amended ("ADEA"). Employee also acknowledges that the consideration given for the Release above is in addition to anything of value to which he was already entitled. Employee further acknowledges that he has been advised by this writing, as required by the ADEA and as provided under the Older Workers Benefit Protection Act of 1990, that (a) he has the right to consult with an attorney before signing this Release; (b) his Release does not apply to any rights or claims that may arise after the date he signs this Release; (c) he has twenty-one (21) days after receipt of notice of his termination and a copy of this Release in final form within which he may review and consider this Release, discuss it with an attorney of his own choosing, and decide to execute or not execute it (although he may choose to voluntarily execute this Release earlier); (d) he has a period of seven (7) days after he signs this Release to revoke the Release; and (e) this Release will not be effective (the "Release Effective Date") until the eighth day after this Release has been signed by Employee, and only then if Employee does not revoke it. In order to revoke this Release, Employee must deliver to the Company, within seven (7) days after he has signed this Release, a letter stating that he is revoking it. Employee understands that if he chooses to revoke this Release within seven (7) days after he signs it, he will not receive any severance benefits and the Release will have no effect.

If Employee is not forty (40) years of age or older as of the Separation Date, the Release Effective Date will be the date that both parties have signed this Release.

Voluntary Execution of Agreement. This Agreement is executed voluntarily and without any duress or undue influence on the part or behalf of the parties hereto, with the full intent of releasing all claims. The parties acknowledge that:

(a) They have read this Agreement;

(b) They have been represented in the preparation, negotiation and execution of this Agreement by legal counsel of their own choice or that they have voluntarily declined to seek such counsel;

(c) They understand the terms and consequences of this Agreement and of the releases it contains; and

(d) They are fully aware of the legal and binding effect of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement on the respective dates set forth below.

_____, an individual	**XCYTE THERAPIES, INC.**
SAMPLE TEMPLATE—TO BE EXECUTED PRIOR TO PAYMENT OF SEVERANCE ONLY	
_____	By: _____
	Its: _____
Dated: _____	Dated: _____

Exhibit 23.1

Consent of Ernst & Young LLP, Independent Auditors

We consent to the reference to our firm under the caption "Experts" and to the use of our report dated January 23, 2004 (except for the first paragraph of Note 13, as to which the date is February XX, 2004), in Amendment No. 2 to the Registration Statement (Form S-1 No. 333-109653) and related Prospectus of Xcyte Therapies, Inc. for the registration of 4,600,000 shares of its common stock.

Ernst & Young LLP

Seattle, Washington
February XX, 2004

The foregoing consent is in the form that will be signed upon the completion of reverse stock split, described in Note 13 to the financial statements.

/s/ Ernst & Young LLP

Seattle, Washington
February 13, 2004