Altus Pharmaceuticals Inc.
Form 424B4
January 26, 2006

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Filed pursuant to Rule 424(b)(4)
Registration Statement Nos. 333-129037 and 333-131285

P R O S P E C T U S
Issued January 26, 2006

7,000,000 Shares
Common Stock

This is the initial public offering of our common stock. We are offering 7,000,000 shares of common stock.

Prior to this offering, there has been no public market for the common stock. Our common stock has been approved for quotation on the Nasdaq National Market under the symbol ALTU.

Investing in our common stock involves risks that are described in the Risk Factors section beginning on page 7 of this prospectus.

	Per Share	Total
Public offering price	$ 15.00	$ 105,000,000
Underwriting discounts and commissions	$ 1.05	$ 7,350,000
Proceeds, before expenses, to Altus Pharmaceuticals Inc.	$ 13.95	$ 97,650,000

The underwriters may also purchase up to an additional 1,050,000 shares of common stock from us at the public offering price, less the underwriting discounts and commissions, within 30 days from the date of this prospectus to cover overallotments.

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

The shares of common stock will be ready for delivery on or about January 31, 2006.

Merrill Lynch & Co. **Morgan Stanley**

SG Cowen & Co.

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You should rely only on the information contained in this prospectus or to which we have referred you. We have not, and the underwriters have not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are offering to sell, and are seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock. Our business, financial conditions, results of operations and prospects may have changed since that date.

For investors outside the United States: Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

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PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before buying shares of our common stock. You should read the entire prospectus carefully, especially the risks of investing in shares of our common stock that we describe under Risk Factors, and our consolidated financial statements and the related notes included at the end of this prospectus, before deciding to invest in shares of our common stock. Unless the context requires otherwise, references to Altus, we, our and us in this prospectus refer to Altus Pharmaceuticals Inc. and our subsidiary.

ALTUS PHARMACEUTICALS INC.

Our Company

We are a biopharmaceutical company focused on the development and commercialization of oral and injectable protein therapeutics for chronic gastrointestinal and metabolic disorders, with two product candidates in clinical development. We are using our proprietary protein crystallization technology to develop protein therapies which we believe will have significant advantages over existing products or will address unmet medical needs. Our two lead product candidates are: ALTU-135, for which we have successfully completed a Phase II clinical trial in cystic fibrosis patients for the treatment of malabsorption due to exocrine pancreatic insufficiency, and ALTU-238, for which we are currently conducting a Phase II clinical trial in adults for the treatment of growth hormone deficiency. Our Phase II clinical trial of ALTU-135 reached its primary efficacy endpoint, a statistically significant improvement in fat absorption. We also have a pipeline of other product candidates in preclinical research and development.

Our Lead Product Candidates

ALTU-135 for Exocrine Pancreatic Insufficiency. ALTU-135 is an orally-administered enzyme replacement therapy for the treatment of malabsorption due to exocrine pancreatic insufficiency. Exocrine pancreatic insufficiency is a deficiency of digestive enzymes normally produced by the pancreas which leads to malnutrition, impaired growth and shortened life expectancy. Exocrine pancreatic insufficiency can result from a number of diseases and conditions, including cystic fibrosis, chronic pancreatitis and pancreatic cancer. According to IMS Health, global prescription sales of existing pancreatic enzyme replacement products were $658 million in 2004.

We believe that ALTU-135, if approved, will have significant competitive advantages compared to existing pancreatic enzyme replacement therapies. The existing therapies are derived from pig pancreases and are expected to be subject to increased regulatory scrutiny based on the Food and Drug Administration, or FDA, guidelines for such therapies released in April 2004. We believe the potential advantages of ALTU-135 include:

- benefits associated with a drug that is microbially-derived, rather than a drug derived from pig pancreases, and manufactured in a controlled environment;
- a significantly lower pill burden, allowing patients to take, on average, one capsule per meal or snack compared to, on average, four or five larger capsules per meal or snack with existing products;
- more consistent and reliable dosing;
- resistance to degradation early in the gastrointestinal tract, permitting enzyme activity where most digestion and absorption of fats, proteins and carbohydrates normally occurs;
- the potential for a liquid formulation, which is currently unavailable, for children and adults who are unable to swallow capsules; and
- testing in what we believe is the largest well-controlled, scientifically-rigorous prospective clinical trial conducted to date in the treatment of cystic fibrosis patients with pancreatic insufficiency.

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We believe that many of these advantages are a result of our proprietary protein crystalization technology, which enables improved product consistency and stability, as well as higher concentration and purity. We may be unable to achieve or demonstrate the potential advantages of ALTU-135 noted above for many reasons, including the risks described in the section entitled Risk Factors immediately following this prospectus summary.

In our recently completed prospective, randomized, double-blind, dose-ranging Phase II clinical trial of the solid form of ALTU-135, the product candidate was well tolerated and showed a statistically significant improvement in fat absorption, the trial s primary efficacy endpoint, in the two high dose treatment arms. In these two treatment arms, we also observed a statistically significant improvement in protein absorption and a statistically significant decrease in stool weight, each of which was a secondary endpoint in the study. In addition, we observed a positive trend, although not statistically significant, in carbohydrate absorption in these treatment arms. We recently met with the FDA to discuss the results of our Phase II clinical trial and our planned Phase III clinical trial for the solid form of ALTU-135. We expect to initiate a pivotal Phase III clinical trial of the solid form of ALTU-135 in cystic fibrosis patients in the second half of 2006 and to complete clinical testing in this trial in the first half of 2007. We also expect to initiate a long-term safety study in cystic fibrosis patients and other patients with pancreatic insufficiency in the second half of 2006. The FDA and the European Medicines Agency, or EMEA, have granted ALTU-135 orphan drug designation. Additionally, the FDA has granted ALTU-135 fast track designation and admission into its Continuous Marketing Application, or CMA, Pilot 2 Program, which is designed to facilitate interactions between a drug developer and the FDA during the drug development process.

ALTU-238 for Growth Hormone Deficiency and Related Disorders. ALTU-238 is a crystallized formulation of human growth hormone, or hGH, that is designed to be injected once weekly with a fine gauge needle for the treatment of growth hormone deficiency and hGH-related disorders. Human growth hormone deficiency can result in reduced growth in children and lead to short stature and other disorders in adults, such as lipid abnormalities, decreased bone density, obesity, insulin resistance, decreased cardiac performance and decreased muscle mass. Based on reported revenues of existing products, global sales of hGH products exceeded $2.2 billion in 2004, and the market grew at a compound annual growth rate of approximately 15% from 2002 to 2004.

We are developing ALTU-238 for both adult and pediatric populations as an alternative to current therapies. Current medical guidelines for clinical practice generally recommend daily administration of existing therapies by subcutaneous injection. We believe that the burden of daily injections significantly impacts quality of life for both adults and children being treated with hGH therapy and often leads to reduced compliance or a reluctance to initiate therapy. Our crystalline formulation of hGH is designed to release hGH into a patient s bloodstream over a period of time without any alteration of the hGH molecule. In our Phase I clinical trial of ALTU-238, which we completed in June 2005, ALTU-238 demonstrated pharmacokinetic and pharmacodynamic parameters that are consistent with once-weekly administration. We recently initiated a Phase II clinical trial for ALTU-238 in adults with growth hormone deficiency and expect to have data from this trial in the first half of 2006.

Our Protein Crystallization Technology

Our product candidates are based on our proprietary technology, which enables the large-scale crystallization of proteins for use as therapeutic drugs. We believe that by using our technologies we are able to overcome many of the limitations of existing protein therapies and deliver proteins in solid and liquid oral forms, as well as in extended-release injectable formulations. Our product candidates are designed to offer improvements over existing products, such as greater convenience, better safety and efficacy and longer shelf life. In addition, we believe that we may be able to reduce the development risk and time to market for our drug candidates because we apply our technology to existing, well-understood proteins with well-defined mechanisms of action. We believe that our technology is broadly applicable to different classes of proteins, including enzymes, hormones, antibodies, cytokines and peptides. To date, we have crystallized more than 70 proteins for evaluation in our research and development programs.

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Our Strategy

Our goal is to become a leading biopharmaceutical company focused on developing and commercializing protein therapies to address unmet medical needs in chronic gastrointestinal and metabolic disorders. The key elements of our strategy to achieve this objective include the following:

- Focus on advancing our lead product candidates, ALTU-135 and ALTU-238, through clinical trials to submission of a new drug application, or NDA;
- Continue to build and advance our product pipeline for gastrointestinal and metabolic disorders;
- Establish a commercial infrastructure and targeted specialty sales force in North America;
- Selectively establish collaborations for our product candidates with leading pharmaceutical and biotechnology companies in cases where we believe their expertise can help us to accelerate the development of or more effectively commercialize our product candidates; and
- Establish additional collaborations to apply our technology to other therapeutic proteins.

Risks Associated with Our Business

Our business is subject to numerous risks, as more fully described in the section entitled Risk Factors immediately following this prospectus summary. We may be unable, for many reasons, including those that are beyond our control, to implement our current business strategy. Those reasons could include unfavorable clinical trial results; delays in obtaining, or a failure to obtain, regulatory approval for our product candidates; problems that may arise under our licensing and collaboration agreements; and failure to maintain and protect our proprietary intellectual property assets.

We have incurred significant losses since 1999, when we were reorganized as a company independent from Vertex Pharmaceuticals Incorporated, or Vertex. We incurred net losses of $17.3 million in 2002, $15.2 million in 2003, $21.0 million in 2004 and $19.1 million in the nine months ended September 30, 2005. At September 30, 2005, our accumulated deficit was $112.1 million, and we expect to continue to incur losses for at least the next several years. We have only been able to generate limited amounts of revenue from license and milestone payments under our collaboration agreements, payments for funded research and development and products we no longer sell. None of our product candidates have been approved by the FDA for commercial sale. We expect that our annual operating losses will increase over the next several years as we advance ALTU-135, ALTU-238 and our other product candidates. We are unable to predict the extent of future loses or when we will become profitable, if at all. Even if we succeed in developing and commercializing one or more of our product candidates, we may never generate sufficient revenue to achieve and sustain profitability.

Our Corporate Information

We were incorporated in Massachusetts in October 1992 as a wholly-owned subsidiary of Vertex, from whom we exclusively license specified patents underlying some of our product candidates. In February 1999, we were reorganized as an independent company, and in August 2001 we reincorporated in Delaware. Prior to May 2004, we were named Altus Biologics Inc.

Our principal executive offices are located at 125 Sidney Street, Cambridge, MA 02139, and our telephone number is (617) 299-2900. Our web site address is *www.altus.com*. The information contained on, or that can be accessed through, our web site is not incorporated by reference into this prospectus. We have included our web site address as a factual reference and do not intend it to be an active link to our web site. We have one subsidiary, Altus Pharmaceuticals Securities Corp., a Massachusetts corporation.

Altus is a trademark of Altus Pharmaceuticals Inc. Each of the other trademarks, trade names or service marks appearing in this prospectus belongs to its respective holder.

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THE OFFERING

Common stock offered by us	7,000,000 shares
Common stock to be outstanding after this offering	21,001,943 shares
Use of proceeds	We intend to use the net proceeds of this offering to fund clinical trial activities, preclinical research and development activities and for other general corporate purposes, including capital expenditures and working capital. See Use of Proceeds.
Nasdaq National Market symbol	ALTU
Risk factors	See Risk Factors and the other information included in this prospectus for a discussion of factors you should carefully consider before deciding to invest in shares of our common stock.

Except as otherwise indicated, the number of shares to be outstanding after this offering throughout this prospectus is based on the number of shares outstanding on December 31, 2005, and excludes:

- 3,056,807 shares of common stock issuable upon the exercise of outstanding stock options as of December 31, 2005, with a weighted average exercise price of $4.26 per share;
- 4,121,189 shares of common stock issuable upon the exercise of outstanding warrants as of December 31, 2005, with a weighted average exercise price of $7.17 per share; and
- 1,497,030 shares available for future issuance under our Amended and Restated 2002 Director, Employee and Consultant Stock Plan to be effective upon the closing of this offering, including 297,030 shares available as of December 31, 2005.

In addition, except as otherwise indicated, the information throughout this prospectus:

- gives effect to the conversion of all outstanding shares of our convertible preferred stock into 10,767,306 shares of common stock, which will occur automatically upon the closing of this offering;
- gives effect to the issuance of 1,391,828 shares of common stock to the holders of our Series B and C convertible preferred stock upon the closing of this offering in satisfaction of accumulated dividends, as required by the terms of the Series B and C convertible preferred stock, all of which is described more fully under the section of this prospectus entitled Capitalization ;
- assumes no exercise by the underwriters of their option to purchase up to 1,050,000 additional shares of common stock from us in the offering;
- reflects a 1-for-2.293 reverse split of our common stock effected in January 2006; and
- gives effect to the filing of our restated certificate of incorporation and the adoption of our restated bylaws upon the completion of this offering.

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SUMMARY CONSOLIDATED FINANCIAL DATA

We have derived the following summary of our consolidated statements of operations data for the years ended December 31, 2002, 2003 and 2004 from our audited consolidated financial statements appearing elsewhere in this prospectus. We have derived the following summary of our consolidated statements of operations data for the nine months ended September 30, 2004 and 2005 and the consolidated balance sheet data as of September 30, 2005 from our unaudited consolidated financial statements appearing elsewhere in this prospectus. The summary of our consolidated financial data set forth below should be read together with our consolidated financial statements and the related notes to those statements, as well as Management s Discussion and Analysis of Financial Condition and Results of Operations, appearing elsewhere in this prospectus.

The pro forma unaudited balance sheet data as of September 30, 2005 gives effect to the conversion of all then outstanding shares of our convertible preferred stock into 10,767,306 shares of common stock, which will occur automatically upon the closing of this offering. The pro forma as adjusted consolidated balance sheet data as of September 30, 2005 further reflects the receipt of the net proceeds from our sale of 7,000,000 shares of common stock at the initial public offering price of $15.00 per share in this offering, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

	Year Ended December 31,			Nine Months Ended September 30,	
	2002	2003	2004	2004	2005
	(in thousands, except per share amounts)				
Consolidated Statements of Operations Data:					
Revenue					
Contract revenue	$ 1,885	$ 2,613	$ 4,045	$ 2,891	$ 6,727
Product sales	483	1,268	185	185	
Total revenue	2,368	3,881	4,230	3,076	6,727
Operating expenses:					
Cost of product sales	241	578	87	87	
Research and development	13,174	13,282	19,095	11,995	19,792
General, sales and administrative	6,859	5,533	6,320	4,623	6,003
Total operating expenses	20,274	19,393	25,502	16,705	25,795
Loss from operations	(17,906)	(15,512)	(21,272)	(13,629)	(19,068)
Interest income	853	405	646	405	701
Interest expense	(156)	(251)	(469)	(351)	(617)
Other (expense) income, net	(81)	164	138	138	(125)
Net loss	(17,290)	(15,194)	(20,957)	(13,437)	(19,109)
Preferred stock dividends and accretion	(4,905)	(4,905)	(8,588)	(5,845)	(8,169)
Net loss attributable to common stockholders	$ (22,195)	$ (20,099)	$ (29,545)	$ (19,282)	$ (27,278)
Basic and diluted net loss per common share	$ (13.16)	$ (11.92)	$ (17.33)	$ (11.34)	$ (15.84)

Shares used in computing basic and diluted net loss per common share	1,687	1,687	1,704	1,700	1,722

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	As of September 30, 2005		
	Actual	Pro Forma	Pro Forma as Adjusted
	(in thousands)		
Consolidated Balance Sheet Data:			
Cash and cash equivalents, and short-term investments	$ 32,009	$ 32,009	$ 127,309
Working capital	22,302	22,302	117,602
Total assets	44,171	44,171	139,471
Deferred revenue	10,426	10,426	10,426
Long-term debt, net of current portion	4,210	4,210	4,210
Redeemable preferred stock	116,634	5,779	5,779
Total stockholders (deficit) equity	(94,517)	16,338	111,638

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RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider carefully the risks described below and the other information in this prospectus, including our consolidated financial statements and the related notes appearing at the end of this prospectus, before deciding to invest in our common stock. If any of the following risks actually occur, they may materially harm our business, our financial condition and our results of operations. In that event, the market price of our common stock could decline, and you could lose part or all of your investment.

Risks Related to Our Business and Strategy

If we fail to obtain the additional capital necessary to fund our operations, we will be unable to successfully develop and commercialize our product candidates.

We will require substantial future capital in order to continue to complete clinical development and commercialize our clinical-stage product candidates, ALTU-135 and ALTU-238, and to conduct the research and development and clinical and regulatory activities necessary to bring our other product candidates to market. Our future capital requirements will depend on many factors, including:

- the progress and results of our toxicology studies and proposed Phase III clinical trial and long-term safety study for ALTU-135 and any other trials we may initiate based on the results of these trials;
- the progress and results of our Phase II clinical trial for ALTU-238 and any other trials we may initiate based on the Phase II results;
- the results of our preclinical studies and testing for our earlier stage product candidates, and any decisions to initiate clinical trials if supported by the preclinical results;
- the costs, timing and outcome of regulatory review of ALTU-135 and ALTU-238, and any of our preclinical product candidates that progress to clinical trials;
- the costs of establishing sales and marketing functions, if any of our product candidates are approved, and of establishing commercial manufacturing arrangements;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our issued patents, and defending intellectual property-related claims;
- our ability to establish and maintain collaborative arrangements and obtain milestone, royalty and other payments from collaborators; and
- the extent to which we acquire or invest in businesses, products or technologies.

Additional funds may not be available when we need them on terms that are acceptable to us, or at all. If adequate funds are not available to us on a timely basis, we may be required to:

- terminate or delay preclinical studies, clinical trials or other development activities for one or more of our product candidates; or
- delay our establishment of sales and marketing capabilities or other activities that may be necessary to commercialize our product candidates.

Based on our operating plans, we estimate that our net cash used in operating activities will be between $55 million and $65 million in 2006. We currently expect that the proceeds we receive from this offering, our existing cash resources and investment securities and payments we expect to receive from our existing collaborators will be sufficient to support the development of our product candidates and our other operations, as more specifically identified in the Use of Proceeds section of this prospectus, through the first half of 2007. We expect that in the first half of 2007 we will have completed the clinical testing in the Phase III clinical trial of the solid form of ALTU-135,

will be conducting the long-term safety study for ALTU-135, and will be conducting a Phase III clinical trial in adults and a Phase II/III clinical trial in children for ALTU-238. We do not expect that we will be required to make any payments to our existing collaborators prior to approval of ALTU-135. However, our operating plan may change as a result of many

factors, including factors currently unknown to us, and we may need additional funds sooner than planned. We do not expect the net proceeds from this offering and our other available funds to be sufficient to fund the completion of the development of any of our product candidates, and we expect that we will need to raise additional funds prior to being able to market any products. Additional funding may not be available to us on acceptable terms, or at all.

We are obligated under our agreement with CFFTI and under the terms of our redeemable preferred stock to make significant payments upon the occurrence of specified events. We may not have sufficient resources to make these payments when they become due.

If we receive FDA approval for ALTU-135 or related products, we must pay one of our collaborators, Cystic Fibrosis Foundation Therapeutics, Inc., or CFFTI, an affiliate of the Cystic Fibrosis Foundation, an amount equal to CFFTI s aggregate funding to us plus interest, up to a maximum of $40.0 million, less the fair market value of the shares of stock underlying the warrants we issued to CFFTI. This amount, together with accrued interest, will be due in four annual installments, commencing 30 days after the approval date. We will also be required to pay an additional $1.5 million to CFFTI within 30 days after the approval date. Our initial payments to CFFTI upon approval of ALTU-135 will be due before we receive revenue from commercial sales of the product, which could require us to raise additional funds or make it difficult for us to make the payments in a timely manner. In addition, if the holder of our redeemable preferred stock elects to redeem those shares on or after December 31, 2010, we will be required to pay an aggregate of $7.2 million plus dividends accruing after that date. We may require additional funding to make any such payments. Additional funds may not be available to us on acceptable terms, or at all.

We have a history of net losses, which we expect to continue for at least several years and, as a result, we are unable to predict the extent of any future losses or when, if ever, we will achieve, or be able to maintain, profitability.

We have incurred significant losses since 1999, when we were reorganized as a company independent from Vertex. We incurred net losses of $17.3 million in 2002, $15.2 million in 2003, $21.0 million in 2004 and $19.1 million in the nine months ended September 30, 2005. At September 30, 2005, our accumulated deficit was $112.1 million and we expect to continue to incur losses for at least the next several years. We have only been able to generate limited amounts of revenue from license and milestone payments under our collaboration agreements, and payments for funded research and development, as well as from products we no longer sell. We expect that our annual operating losses will increase over the next several years as we expand our research, development and commercialization efforts to advance ALTU-135, ALTU-238 and our other product candidates towards commercialization.

We must generate significant revenue to achieve and maintain profitability. All of our product candidates are still in early-to-mid stages of development. Even if we succeed in developing and commercializing one or more of our product candidates, we may not be able to generate sufficient revenue or achieve or maintain profitability. Our failure to become and remain profitable would depress the market price of our common stock and could impair our ability to raise capital, expand our business, diversify our product offerings or continue our operations.

Our competitors may develop products that are less expensive, safer or more effective, which may diminish or prevent the commercial success of any product candidates that we bring to market.

Competition in the pharmaceutical and biotechnology industries is intense and expected to increase. We face competition from pharmaceutical and biotechnology companies, as well as numerous academic and research institutions and governmental agencies engaged in drug discovery activities or funding, both in the United States and abroad. Some of these competitors have products or are pursuing the development of product candidates that target the same diseases and conditions that are the focus of

our drug development programs, including those set forth below. In addition, there may be others of which we are unaware.

ALTU-135. If approved, ALTU-135, the product candidate we are developing for the treatment of malabsorption due to exocrine pancreatic insufficiency, will compete with currently marketed porcine-derived pancreatic enzyme replacement therapies from companies such as Axcan Pharma, Johnson & Johnson, and Solvay Pharmaceuticals, as well as from generic drug manufacturers such as KV Pharmaceutical and IMPAX Laboratories. In addition, we understand that Biovitrium and Meristem Therapeutics have product candidates in clinical development that could compete with ALTU-135.

ALTU-238. If approved, ALTU-238, the product candidate we are developing as a once-weekly treatment for hGH deficiency and related disorders, will compete with approved hGH therapies from companies such as Genentech, Pfizer, Serono, Novo Nordisk, Teva Pharmaceutical Industries and Eli Lilly. In addition, we understand that ALTU-238 may compete with product candidates in clinical development from some of these companies and others, including LG Life Sciences, which is developing a long-acting hGH therapy based on an encapsulated microparticle technology.

Existing products to treat exocrine pancreatic insufficiency have been marketed in the United States since before the passage of the Federal Food, Drug, and Cosmetic Act, or FDCA, in 1938 and are currently marketed without FDA-approved NDAs. In 1995, the FDA issued a final rule requiring that these pancreatic enzyme products be marketed by prescription only, and in April 2004, the FDA issued a notice that manufacturers of these products will be subject to regulatory action if they do not obtain approved NDAs for their products by April 28, 2008. Despite the FDA s announced position, the agency may not pursue regulatory action against these companies if they fail to meet the 2008 deadline because there are currently no other products on the market for the treatment of exocrine pancreatic insufficiency. The level of competition that ALTU-135, if approved, will face from these products in the United States will depend on whether the manufacturers of these products obtain approved NDAs by the deadline set by the FDA and, if they are unable to do so, whether the FDA takes regulatory action against these manufacturers and the nature of any such action. The nature of the competition that ALTU-135, if approved, faces from existing pancreatic enzyme products could affect the market acceptance of ALTU-135 or require us to lower the price of ALTU-135, which would negatively impact our margins and our ability to achieve profitability.

Raising additional capital by issuing securities or through collaboration and licensing arrangements may cause dilution to existing stockholders, restrict our operations or require us to relinquish proprietary rights.

We may seek the additional capital necessary to fund our operations through public or private equity offerings, debt financings, and collaboration and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of such securities may include liquidation or other preferences that adversely affect your rights as a stockholder. In addition, many of the warrants that we have issued contain anti-dilution provisions that will result in the issuance of additional shares of common stock upon exercise, and thus further dilution, if we issue or are deemed to issue equity at a per share price less than the exercise price of the warrants. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions such as incurring additional debt, making capital expenditures, or declaring dividends. If we raise additional funds through collaboration and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms that are not favorable to us.

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We may not be successful in maintaining our existing collaborations or in establishing and maintaining additional collaborations on acceptable terms, which could adversely affect our ability to develop and commercialize our products.

An element of our business strategy is to establish collaborative arrangements with third parties, particularly with regard to development, regulatory approval, sales, marketing and distribution of our products outside of North America. We may also collaborate with other companies to accelerate the development of some of our early-stage product candidates, or to co-promote our product candidates in North America in instances where we believe that a larger sales and marketing presence will expand the market or accelerate penetration. The process of establishing new collaborative relationships is difficult, time-consuming and involves significant uncertainty. We face, and will continue to face, significant competition in seeking appropriate collaborators. Moreover, if we do establish collaborative relationships, our collaborators may fail to fulfill their responsibilities or seek to renegotiate or terminate their relationships with us due to unsatisfactory clinical results, a change in business strategy, a change of control or other reasons. If we are unable to establish and maintain collaborative relationships on acceptable terms, we may have to delay or discontinue further development of one or more of our product candidates, undertake development and commercialization activities at our own expense or find alternative sources of funding.

For example, we have entered into a collaboration agreement with CFFTI under which we have received significant funding for the development of ALTU-135. We are also eligible to receive additional payments if we achieve specified milestones under the agreement. Additionally, the collaboration provides us with access to the Cystic Fibrosis Foundation s network of medical providers, patients, researchers and others involved in the care and treatment of cystic fibrosis patients. Our agreement with CFFTI provides for an exclusive license from us to CFFTI, and an exclusive sublicense back with a right to further sublicense from CFFTI, of intellectual property rights covering the development and commercialization of ALTU-135 in North America. The agreement with CFFTI requires us to use commercially reasonable efforts to develop and commercialize ALTU-135 in North America for the treatment of malabsorption due to exocrine pancreatic insufficiency in patients with cystic fibrosis and other indications. We are also required to meet specified milestones under the agreement by agreed upon dates. If we are unable to satisfy our obligations under the agreement, we may lose further funding under the agreement and lose our exclusive sublicense to ALTU-135 in North America, which will materially harm our business.

We are in discussions with our collaborator Dr. Falk Pharma GmbH regarding its claim that we have breached a representation in our collaboration agreement. If we are unable to successfully resolve this matter, our business may be materially harmed.

We have entered into a collaboration agreement with Dr. Falk Pharma GmbH, or Dr. Falk, a specialty pharmaceutical company headquartered in Germany. We have received substantial funding from Dr. Falk for the development and commercialization of ALTU-135 in Europe, the countries of the former Soviet Union, Egypt and Israel, and we are eligible to receive additional payments if we achieve specified milestones under the agreement. Dr. Falk has asserted that there is a third-party European patent issued in specified countries, including Germany, France and the United Kingdom, with claims that may be relevant to ALTU-135 and, therefore, that we breached a representation in our agreement with Dr. Falk and may be liable for damages under our agreement. We do not believe that we breached our agreement, and we are in discussions with Dr. Falk to resolve this matter. We also believe that if this patent were asserted against us, it is likely that we would not be found to infringe any valid claim of the patent relevant to our development and commercialization of ALTU-135. However, if the patent were successfully asserted against us or Dr. Falk and we were unable to obtain a license on commercially acceptable terms, we and Dr. Falk would be prevented during the patent term from commercializing ALTU-135 in the covered countries. Based on our current development timeline for ALTU-135 in Europe and excluding any patent term extensions, we expect that the patent in question would expire approximately three years after we would expect to receive marketing authorization for ALTU-135 in Europe. We may not reach a resolution of this matter with Dr. Falk, or prevail if the patent were asserted against us, or, if necessary, be able to

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obtain a license under the patent on commercially acceptable terms, if at all. If we are unable to do so, our business could be materially harmed.

Risks Related to Development of Our Product Candidates

If we are unable to commercialize either of our lead product candidates, or experience significant delays in doing so, our business will be materially harmed.

We have invested a significant portion of our time and financial resources to date in the development of oral and injectable crystallized protein therapies, including ALTU-135 and ALTU-238, for the treatment of chronic gastrointestinal and metabolic disorders. Our ability to successfully develop and commercialize ALTU-135 and ALTU-238, and therefore our ability to generate revenues, will depend on numerous factors, including:

- obtaining supplies of ALTU-135 and ALTU-238 for completion of our clinical trials and toxicology studies on a timely basis;
- receiving marketing approvals from the FDA and foreign regulatory authorities;
- arranging for commercial-scale supplies of our products with contract manufacturers whose manufacturing facilities are operated in compliance with current good manufacturing practice regulations, or cGMP;
- establishing sales, marketing and distribution capabilities on our own or through third parties;
- establishing favorable pricing from foreign regulatory authorities; and
- obtaining commercial acceptance of ALTU-135 and ALTU-238, if approved, in the medical community and by third-party payors.

If we are not successful in commercializing ALTU-135 or ALTU-238, or are significantly delayed in doing so, our business will be materially harmed.

Because our product candidates are in early- or mid-stage development, there is a significant risk of failure.

Of the large number of drugs in development, only a small percentage result in the submission of an NDA to the FDA, and even fewer are approved for commercialization. We will only receive regulatory approval to commercialize a product candidate if we can demonstrate to the satisfaction of the FDA or the applicable foreign regulatory authority, in well-designed and conducted clinical trials, that the product candidate is safe and effective and otherwise meets the appropriate standards required for approval for a particular indication. Clinical trials are lengthy, complex and extremely expensive processes with uncertain results. A failure of one or more of our clinical trials may occur at any stage of testing. We have limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA.

We have not yet completed late-stage clinical trials for our two lead product candidates, and we have not advanced, and may never advance, any of our other product candidates into clinical trials. We have completed a Phase II clinical trial for the solid form of ALTU-135, our most advanced product candidate, and we expect to advance this product candidate into a Phase III clinical trial and long-term safety study in the second half of 2006. We expect to complete clinical testing in the Phase III clinical trial in the first half of 2007. In order for ALTU-135 to be approved by the FDA, we will be required to demonstrate in the Phase III clinical trial, to a statistically significant degree, that ALTU-135 improves absorption of fat in patients suffering from malabsorption as a result of exocrine pancreatic insufficiency. We will also be required to demonstrate the safety of ALTU-135 in a long-term study. However, we may not be successful in meeting the primary or secondary endpoints for this Phase III trial or the goal of the long-term safety study. The possibility exists that even if these trials are successful, we may still be required to perform additional studies for approval. In addition, we will need to complete specified

toxicology studies in animals before submitting an NDA, and the results of those studies may not demonstrate sufficient safety.

For ALTU-238, we have completed a Phase I clinical trial in healthy adults and are currently enrolling adults with hGH deficiency in a Phase II clinical trial. We expect to initiate a Phase III clinical trial of ALTU-238 in adults and a Phase II/III clinical trial of ALTU-238 in children in the second half of 2006. We plan to request that the FDA consider the single Phase II/III clinical trial in children as a pivotal trial. The FDA may not agree with this proposal and may require us to conduct an additional Phase III trial in children. We have not yet tested the efficacy of ALTU-238 in a human clinical trial, and ALTU-238 may prove not to be clinically effective as an extended-release formulation of hGH. In addition, it is possible that patients receiving ALTU-238 will suffer additional or more severe side effects than we observed in our Phase I clinical trial, which could delay or preclude regulatory approval of ALTU-238 or limit its commercial use.

If we observe serious or other adverse events during the time our product candidates are in development or after our products are approved and on the market, we may be required to perform lengthy additional clinical trials, may be denied regulatory approval of such products, may be forced to change the labeling of such products or may be required to withdraw any such products from the market, any of which would hinder or preclude our ability to generate revenues.

To date, there has been one serious adverse event considered by an investigator in our clinical trials as probably or possibly related to treatment with ALTU-135 and no such serious adverse events related to our other product candidates. The one serious adverse event in our Phase II trial of ALTU-135 involved a subject in the lowest dose group who developed distal intestinal obstructive syndrome, or DIOS, which resolved itself without further complications. DIOS is a unique condition to cystic fibrosis and occurs due to the accumulation of viscous mucous and fecal material in the colon. According to a 1987 study, DIOS is relatively common in cystic fibrosis, occurring in about 16% of patients. In our Phase II clinical trial of ALTU-135 we also observed elevated levels of liver transaminases, which can be associated with harm to the liver. These elevations were transient and asymptomatic and were not reported as drug-related serious adverse events. Elevation of liver transaminases is common among cystic fibrosis patients. The elevations we observed may or may not have been caused by ALTU-135. The increases we observed were not associated with increases in bilirubin, which are typically associated with harm to the liver.

If the incidence of these events increases in number or severity, if a regulatory authority believes that these events constitute an adverse effect caused by the drug, or if other effects are identified either during future clinical trials or after any of our drug candidates are approved and on the market:

- we may be required to conduct additional pre-clinical or clinical trials, make changes in labeling of any such products, reformulate any such products, or implement changes to or obtain new approvals of our or our contractors manufacturing facilities;
- regulatory authorities may be unwilling to approve our product candidates or may withdraw approval of our products;
- we may experience a significant drop in the sales of the affected products;
- our reputation in the marketplace may suffer; and
- we may become the target of lawsuits, including class action suits.

Any of these events could prevent approval or harm sales of the affected products or could substantially increase the costs and expenses or commercializing and marketing any such products.

If clinical trials for our product candidates are prolonged or delayed, we may be unable to commercialize our product candidates on a timely basis, or at all, which would require us to incur additional costs and delay our receipt of any revenue from potential product sales.

We may encounter problems with our ongoing or planned clinical trials that will cause us or a regulatory authority to delay or suspend those clinical trials or delay the analysis of data derived from

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them. A number of events or factors, including any of the following, could delay the completion of our ongoing and planned clinical trials and negatively impact our ability to obtain regulatory approval for, and to market and sell, a particular product candidate, including our clinical-stage product candidates, ALTU-135 and ALTU-238:

- conditions imposed on us by the FDA or any foreign regulatory authority regarding the scope or design of our clinical trials;
- delays in obtaining, or our inability to obtain or maintain, required approvals from institutional review boards, or IRBs, or other reviewing entities at clinical sites selected for participation in our clinical trials;
- insufficient supply or deficient quality of our product candidates or other materials necessary to conduct our clinical trials;
- difficulties enrolling subjects in our clinical trials, including finding pediatric subjects with hGH deficiency who have not previously received hGH therapy for our pediatric trials of ALTU-238;
- high drop-out rates of subjects in our clinical trials;
- negative or inconclusive results from clinical trials, or results that are inconsistent with earlier results, that necessitate additional clinical studies;
- serious or unexpected drug-related side effects experienced by subjects in clinical trials; or
- failure of our third-party contractors or our investigators to comply with regulatory requirements or otherwise meet their contractual obligations to us in a timely manner.

Our clinical trials may not begin as planned, may need to be redesigned, and may not be completed on schedule, if at all. Delays in our clinical trials may result in increased development costs for our product candidates, which would cause our stock price to decline and limit our ability to obtain additional financing. In addition, if one or more of our clinical trials are delayed, our competitors may be able to bring products to market before we do, and the commercial viability of our product candidates, including our clinical-stage product candidates, ALTU-135 and ALTU-238, could be significantly reduced.

Risks Related to Regulatory Approval of Our Product Candidates and Other Government Regulations

If we do not obtain required regulatory approvals, we will be unable to commercialize our product candidates, and our ability to generate revenue will be materially impaired.

ALTU-135, ALTU-238 and any other product candidates we may discover or acquire and seek to commercialize are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries relating to the testing, manufacture, safety, efficacy, recordkeeping, labeling, packaging, storage, approval, advertising, promotion, sale and distribution of drugs. In the United States and in many foreign jurisdictions, rigorous preclinical testing and clinical trials and an extensive regulatory review process must be successfully completed before a new drug can be sold. We have not obtained regulatory approval for any product. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays.

The time required to obtain approval by the FDA is unpredictable but typically takes many years following the commencement of clinical trials, depending upon numerous factors, including the complexity of the product candidate. Our product candidates may fail to receive regulatory approval for many reasons, including:

- our failure to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for a particular indication;

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the results of clinical trials may not meet the level of statistical significance required by the FDA or other regulatory authorities for approval;

our inability to demonstrate that a product candidate s benefits outweigh its risks;

our inability to demonstrate that the product candidate presents an advantage over existing therapies;

the FDA s or comparable foreign regulatory authorities disagreement with the manner in which we interpret the data from preclinical studies or clinical trials;

the FDA s or comparable foreign regulatory authorities failure to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and

a change in the approval policies or regulations of the FDA or comparable foreign regulatory authorities or a change in the laws governing the approval process.

The FDA or comparable foreign regulatory authorities might decide that our data are insufficient for approval and require additional clinical trials or other studies. Furthermore, even if we do receive regulatory approval to market a commercial product, any such approval may be subject to limitations on the indicated uses for which we may market the product. It is possible that none of our existing product candidates or any product candidates we may seek to develop in the future will ever obtain the appropriate regulatory approvals necessary for us or our collaborators to begin selling them.

Our development of ALTU-238 could be significantly delayed and more expensive if we are unable to follow our current strategy for obtaining regulatory approval from the FDA.

We do not produce hGH, the active ingredient in ALTU-238. Our current development plan assumes that we will obtain hGH from a third-party supplier, which we will then crystallize and formulate for use as a long-acting growth hormone replacement therapy. We have purchased the hGH for our clinical trials to date from Sandoz GmbH, or Sandoz, a subsidiary of Novartis AG. A product containing Sandoz s hGH has not been approved by the FDA or the EMEA. We are currently in negotiations with several manufacturers for a long-term supply of hGH for our development and commercialization of ALTU-238. We believe that our development strategy for ALTU-238 will allow us to pursue one of three regulatory approval paths depending on the source of our long-term supply:

an NDA filing under Section 505(b)(1) of the FDCA utilizing a right of reference to the supplier s safety and efficacy data previously approved by the FDA;

an NDA filing under Section 505(b)(2) relying on published literature and the FDA s previous findings regarding the safety and efficacy of hGH products; or

an NDA submission under Section 505(b)(1) in which we include our own safety and efficacy data.

Please see the paragraph below and the section of the prospectus entitled Business Governmental Regulation and Product Approval United States Government Regulation Section 505(b)(2) Applications.

If we use a supplier with an approved NDA for its hGH product, we will seek a right of reference to the safety and efficacy data on the underlying growth hormone in our supplier s NDA, and we will file an NDA under section 505(b)(1) of the FDCA that contains additional information relating to our crystallized dosage form. However, we may not be able to obtain hGH from a supplier with an approved NDA for its hGH product. If we are not able to obtain a right of reference from a supplier with an approved NDA for its hGH product, and if the FDA or the courts determine that approval of a new hGH drug product is appropriate under section 505(b)(2) of the FDCA, we plan to submit an NDA under section 505(b)(2) of the FDCA and rely, without a right of reference, on published literature and the FDA s previous findings regarding the safety and efficacy of hGH products. We expect that either of

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these routes will enable us to avoid some of the non-clinical studies that would otherwise be required on the underlying hGH molecule, which may reduce the cost of developing ALTU-238 and shorten the time to market. If neither of these two routes is available, we would be required to submit a full NDA under section 505(b)(1) of the FDCA, would not have the ability to refer to third-party studies, and would need to perform whatever studies are necessary to demonstrate the safety and effectiveness of ALTU-238.

The availability of section 505(b)(2) for approval of ALTU-238 is currently uncertain. The FDA has informed us that the FDA has not approved any hGH product under section 505(b)(2), and a manufacturer of another hGH product candidate has initiated a lawsuit against the FDA to compel a ruling on its NDA filed under section 505(b)(2). If we are unable to secure a right of reference to an FDA-approved product or submit an NDA under section 505(b)(2), our cost and development time for ALTU-238 may increase.

Failure to obtain regulatory approvals or to comply with regulatory requirements in foreign jurisdictions would prevent us or our collaborators from marketing our products internationally.

We intend to have our product candidates marketed outside the United States, including in Germany, Japan, the United Kingdom, France and the countries of the former Soviet Union. In order to market products in the European Union and many other non-United States jurisdictions, we or our collaborators must obtain separate regulatory approvals and comply with numerous and varying regulatory requirements. We have no experience in obtaining foreign regulatory approvals. The approval procedures vary among countries and can involve additional and costly preclinical and clinical testing and data review. The time required to obtain approval may differ from that required to obtain FDA approval. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries or by the FDA. We or our collaborators may not receive necessary approvals to commercialize our products in any market. The failure to obtain these approvals could harm our business and result in decreased revenues from milestones or royalties in our collaboration agreements.

We may also face challenges arising from the different regulatory requirements imposed by United States and foreign regulators with respect to clinical trials. The EMEA may impose different requirements than the FDA with respect to the design of a pivotal Phase III clinical trial. For example, we believe that the FDA may not require our Phase III clinical trial of ALTU-135 to include a comparison of ALTU-135 with a currently marketed pancreatic enzyme replacement therapy. We are aware, however, that the EMEA often requires such comparison testing of study drugs with approved therapies, and the EMEA is likely to impose such a requirement for our Phase III clinical trial of ALTU-135 in Europe. Our agreement with Dr. Falk contemplates that we will conduct a combined Phase III clinical trial, with both United States and European clinical sites, to be performed in a manner consistent with the requirements of both the FDA and the EMEA. In light of the potentially different requirements of the FDA and EMEA, we may need to determine with Dr. Falk whether to proceed with an alternate strategy for the Phase III clinical development of ALTU-135.

Our product candidates will remain subject to ongoing regulatory requirements even if they receive marketing approval, and if we fail to comply with these requirements, we could lose these approvals, and the sales of any approved commercial products could be suspended.

Even if we receive regulatory approval to market a particular product candidate, the product will remain subject to extensive regulatory requirements, including requirements relating to manufacturing, labeling, packaging, adverse event reporting, storage, advertising, promotion, distribution and record keeping. Even if regulatory approval of a product is granted, the approval may be subject to limitations on the uses for which the product may be marketed or to the conditions of approval, or contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the product, which could reduce our revenues, increase our expenses and render the approved product candidate not commercially viable. In addition, as clinical experience with a drug expands after approval because it is typically used by a greater number and more diverse group of patients after approval than during clinical trials, side effects and other problems may be observed after approval that were not seen or anticipated

during pre-approval clinical trials or other studies. Any adverse effects observed after the approval and marketing of a product candidate could result in limitations on the use of or withdrawal of any approved products from the marketplace. Absence of long-term safety data may also limit the approved uses of our products, if any. If we fail to comply with the regulatory requirements of the FDA and other applicable United States and foreign regulatory authorities, or previously unknown problems with any approved commercial products, manufacturers or manufacturing processes are discovered, we could be subject to administrative or judicially imposed sanctions or other setbacks, including:

- restrictions on the products, manufacturers or manufacturing processes;
- warning letters;
- civil or criminal penalties;
- fines;
- injunctions;
- product seizures or detentions;
- import or export bans or restrictions;
- voluntary or mandatory product recalls and related publicity requirements;
- suspension or withdrawal of regulatory approvals;
- total or partial suspension of production; and
- refusal to approve pending applications for marketing approval of new products or supplements to approved applications.

If we or our collaborators are slow to adapt, or are unable to adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements or policies, we or our collaborators may lose marketing approval for our products when and if any of them are approved, resulting in decreased revenue from milestones, product sales or royalties.

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

Our activities and those of our third-party manufacturers on our behalf involve the controlled storage, use and disposal of hazardous materials, including microbial agents, corrosive, explosive and flammable chemicals and other hazardous compounds. We and our manufacturers are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. Although we believe that the safety procedures for handling and disposing of these materials comply with the standards prescribed by these laws and regulations, we cannot eliminate the risk of accidental contamination or injury from these materials.

In the event of an accident, state or federal authorities may curtail our use of these materials and interrupt our business operations. In addition, we could be liable for any civil damages that result, which may exceed our financial resources and may seriously harm our business. While we believe that the amount of insurance we currently carry, providing coverage of $1 million, should be sufficient for typical risks regarding our handling of these materials, it may not be sufficient to cover pollution conditions or other extraordinary or unanticipated events. Furthermore, an accident could damage, or force us to shut down, our operations. In addition, if we develop a manufacturing capacity, we may incur substantial costs to comply with environmental regulations and would be subject to the risk of

accidental contamination or injury from the use of hazardous materials in our manufacturing process.

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Risks Related to Our Dependence on Third Parties

We have no manufacturing capacity, and we have relied and expect to continue to rely on third-party manufacturers to produce our product candidates.

We do not own or operate manufacturing facilities for the production of clinical or commercial quantities of ALTU-135, ALTU-238 or any of the compounds that we are testing in our preclinical programs, and we lack the resources and the capabilities to do so. As a result, we currently rely, and we expect to rely in the future, on third-party manufacturers to supply the active pharmaceutical ingredients, or APIs, for our product candidates and to produce and package our drug products. Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured product candidates or products ourselves, including:

- reliance on the third party for manufacturing process development, regulatory compliance and quality assurance;
- limitations on supply availability resulting from capacity and scheduling constraints of the third party;
- the possible breach of the manufacturing agreement by the third party because of factors beyond our control; and
- the possible termination or non-renewal of the agreement by the third party, based on its own business priorities, at a time that is costly or inconvenient for us.

Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our future profit margins and our ability to develop our product candidates and commercialize any products that receive regulatory approval on a timely basis.

We currently rely on a single manufacturer for the clinical supply of each of our product candidates, and we have no arrangements in place for the commercial supply of any of our product candidates, which could delay or prevent the clinical development and commercialization of our product candidates.

We currently depend on a single source supplier for each of our product candidates. Any disruption in production, inability of a supplier to produce adequate quantities to meet our needs or other impediments could adversely affect our ability to successfully complete the clinical trials and other studies of our product candidates, delay submissions of our regulatory applications or adversely affect our ability to commercialize our product candidates in a timely manner, or at all.

We do not currently have any agreements to manufacture our product candidates on a commercial scale. In order to commercialize our product candidates, our existing suppliers will need to scale up their manufacturing of our product candidates. We may be required to fund capital improvements to support scale-up of manufacturing and related activities. Our existing manufacturers may not be able to successfully increase their manufacturing capacity for any of our product candidates for which we obtain marketing approval in a timely or economic manner, or at all. We may need to engage other manufacturers to provide commercial supplies of our product candidates. It may be difficult for us to enter into commercial supply arrangements on a timely basis or on acceptable terms, which could delay or prevent our ability to commercialize our product candidates. If our existing manufacturers are unable or unwilling to increase their manufacturing capacity or we are unable to establish alternative arrangements, the development and commercialization of our product candidates may be delayed or there may be a shortage in supply.

With respect to ALTU-135, we currently rely on Amano Enzyme, Inc., or Amano, located in Nagoya, Japan, for the sole supply of the enzymes that comprise the APIs for ALTU-135. To date, Amano has only supplied us APIs for our clinical trials and our toxicology studies, and we do not have an arrangement for commercial supplies of ALTU-135. In addition, Amano s manufacturing facility that produces the APIs for ALTU-135 has not been inspected or approved by the FDA, EMEA or the Japanese Ministry of Health, Labour and Welfare. Pursuant to our agreement with Amano, they have notified us that they will not be the primary manufacturer of the APIs for the initial commercial supply of ALTU-135. We expect to negotiate a

new agreement with Amano that governs the commercial supply of some of the APIs for ALTU-135. We may not be able to reach an agreement with Amano on the supply of APIs for ALTU-135 for our commercial needs on favorable terms, or at all.

We are in the process of selecting an alternative manufacturer of the APIs for ALTU-135. Switching manufacturers will require cooperation with Amano, technology transfers, training, and validation of the alternative manufacturer s processes. Changes in manufacturing processes or procedures, including a change in the location where the drug is manufactured or a change of a third-party manufacturer, may require prior review and approval from the FDA and satisfaction of comparable foreign requirements. This review may be costly and time-consuming and could delay or prevent the launch of a product. If we are unable to secure another contract manufacturer to supply the APIs for ALTU-135 at an acceptable cost, our commercialization of ALTU-135 could be delayed, prevented or impaired, including an increase in our costs of obtaining the APIs for ALTU-135. Any dispute over the terms of, or decisions regarding, our collaboration with Amano or other adverse developments in our relationship would materially harm our business and might accelerate our need for additional capital.

With respect to ALTU-238, we have purchased the hGH for our clinical trials to date from Sandoz. A product containing the hGH supplied by Sandoz has not been approved by the FDA or the EMEA. We are negotiating with various manufacturers for the commercial supply of hGH for ALTU-238.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or regulatory approval of our product candidates or commercialization of any approved products.

The failure of any of our contract manufacturers to achieve and maintain high manufacturing standards could result in patient injury or death, product liability claims, product recalls, product seizures or withdrawals, delays or failures in testing or delivery, cost overruns, failure of regulatory authorities to grant marketing approvals, delays, suspensions or withdrawals of approvals, injunctions, fines, civil or criminal penalties, or other problems that could seriously harm our business. Contract manufacturers may encounter difficulties involving production yields, quality control and quality assurance. These manufacturers are subject to ongoing periodic unannounced inspection by the FDA and corresponding state and foreign agencies which audit strict compliance with cGMP and other applicable government regulations and corresponding foreign standards. However, we have limited control over third-party manufacturers compliance with these regulations and standards. Our present or future manufacturers might not be able to comply with cGMP and other FDA regulatory requirements or similar regulatory requirements outside of the United States.

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

We rely on third parties such as contract research organizations, medical institutions and clinical investigators to enroll qualified patients and conduct, supervise and monitor our clinical trials. Our reliance on these third parties for clinical development activities reduces our control over these activities. Our reliance on these third parties, however, does not relieve us of our regulatory responsibilities, including ensuring that our clinical trials are conducted in accordance with good clinical practice regulations, or GCP, and the investigational plan and protocols contained in the investigational new drug application, or IND. Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. In addition, they may not complete activities on schedule, or may not conduct our preclinical studies or clinical trials in accordance with regulatory requirements or our trial design. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, our efforts to obtain regulatory approvals for, and commercialize, our product candidates may be delayed or prevented.

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Risks Related to Commercialization of Our Product Candidates

If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our product candidates, we may be unable to generate product revenue.

We have no commercial products, and we do not currently have an organization for the sales, marketing and distribution of pharmaceutical products. In order to successfully commercialize any products that may be approved in the future by the FDA or comparable foreign regulatory authorities, we must build our sales and marketing capabilities or make arrangements with third parties to perform these services. Though we currently plan to retain North American commercialization rights to our products in circumstances where we believe that we can successfully commercialize such products on our own, we may not be able to successfully develop our own sales and marketing force for product candidates for which we have retained marketing rights. If we develop our own sales and marketing capability, we may be competing with other companies that currently have experienced and well-funded sales and marketing operations.

In addition, we may co-promote our product candidates in North America with pharmaceutical and biotechnology companies in instances where we believe that a larger sales and marketing presence will expand the market or accelerate penetration. If we do enter into arrangements with third parties to perform sales and marketing services, our product revenues will be lower than if we directly sold and marketed our products and any revenues received under such arrangements will depend on the skills and efforts of others. If we are unable to establish adequate sales, marketing and distribution capabilities, whether independently or with third parties, we may not be able to generate product revenue and may not become profitable.

If physicians and patients do not accept our future products, we may be unable to generate significant revenue, if any.

Even if we receive regulatory approval for ALTU-135, ALTU-238 or any other product candidates we may develop or acquire in the future, these product candidates may not gain market acceptance among physicians, healthcare payors, patients and the medical community. Physicians may elect not to recommend or patients may elect not to use these products for a variety of reasons, including:

- lower demonstrated clinical safety and efficacy compared to other products;
- prevalence and severity of adverse side effects;
- other potential advantages of alternative treatment methods;
- ineffective marketing and distribution support;
- lack of availability of reimbursement from managed care plans and other third-party payors;
- lack of cost-effectiveness; and
- timing of market introduction of competitive products.

If our approved drugs fail to achieve market acceptance, we will not be able to generate significant revenue, if any.

If the government and third-party payors fail to provide coverage and adequate payment rates for our future products, if any, our revenue and prospects for profitability will be harmed.

In both domestic and foreign markets, our sales of any future products will depend in part upon the availability of reimbursement from third-party payors. Such third-party payors include government health programs such as Medicare, managed care providers, private health insurers and other organizations. These third-party payors are increasingly attempting to contain healthcare costs by demanding price discounts or rebates and limiting both coverage on which drugs they will pay for and the amounts that they will pay for new drugs. As a result, they may not cover or provide adequate payment for our drugs.

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We might need to conduct post-marketing studies in order to demonstrate the cost-effectiveness of any future products to such payors satisfaction. Such studies might require us to commit a significant amount of management time and financial and other resources. Our future products might not ultimately be considered cost-effective. Adequate third-party reimbursement might not be available to enable us to maintain price levels sufficient to realize an appropriate return on investment in product development.

Governments continue to propose and pass legislation designed to reduce the cost of healthcare. In the United States, we expect that there will continue to be federal and state proposals to implement similar governmental controls. For example, in December 2003, Congress enacted a limited prescription drug benefit for Medicare recipients in the Medicare Prescription Drug and Modernization Act of 2003. While this program may increase demand for our products, if we participate in this program, our prices will be negotiated with drug procurement organizations for Medicare beneficiaries and are likely to be lower than we might otherwise obtain. In some foreign markets, the government controls the pricing of prescription pharmaceuticals. In these countries, pricing negotiated with governmental authorities can take six to 12 months or longer after the receipt of regulatory marketing approval for a product. Cost control initiatives could decrease the price that we would receive for any products in the future, which would limit our revenue and profitability. Accordingly, legislation and regulations affecting the pricing of pharmaceuticals might change before our product candidates are approved for marketing. Adoption of such legislation could further limit reimbursement for pharmaceuticals.

There is a substantial risk of product liability claims in our business. If we are unable to obtain sufficient insurance, a product liability claim against us could adversely affect our business.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face even greater risks upon any commercialization by us of our product candidates. We have product liability insurance covering our clinical trials in the amount of $5 million, which we currently believe is adequate to cover any product liability exposure we may have. Clinical trial and product liability insurance is becoming increasingly expensive. As a result, we may be unable to obtain sufficient insurance or increase our existing coverage at a reasonable cost to protect us against losses that could have a material adverse effect on our business. An individual may bring a product liability claim against us if one of our products or product candidates causes, or is claimed to have caused, an injury or is found to be unsuitable for consumer use. Any product liability claim brought against us, with or without merit, could result in:

- liabilities that substantially exceed our product liability insurance, which we would then be required to pay from other sources, if available;
- an increase of our product liability insurance rates or the inability to maintain insurance coverage in the future on acceptable terms, or at all;
- withdrawal of clinical trial volunteers or patients;
- damage to our reputation and the reputation of our products, resulting in lower sales;
- regulatory investigations that could require costly recalls or product modifications;
- litigation costs; and
- the diversion of management s attention from managing our business.

We have product liability insurance covering our clinical trials, which we currently believe is adequate to cover liabilities we may incur. However, liabilities may exceed the extent of our coverage, resulting in material losses. Additionally, clinical trial and product liability insurance is becoming increasingly expensive. As a result, we may be unable to obtain sufficient insurance or increase our existing coverage at a reasonable cost to protect us against losses that could have a material adverse effect on our business.

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Recent proposed legislation may permit re-importation of drugs from foreign countries into the United States, including foreign countries where the drugs are sold at lower prices than in the United States, which could materially adversely affect our operating results and our overall financial condition.

Legislation has been introduced in Congress that, if enacted, would permit more widespread re-importation of drugs from foreign countries into the United States, which may include re-importation from foreign countries where the drugs are sold at lower prices than in the United States. Such legislation, or similar regulatory changes, could decrease the price we receive for any approved products which, in turn, could materially adversely affect our operating results and our overall financial condition.

Risks Related to Our Intellectual Property

If the combination of patents, trade secrets and contractual provisions that we rely on to protect our intellectual property is inadequate, our ability to successfully commercialize our product candidates will be harmed and we may not be able to operate our business profitably.

Our success depends on our ability to obtain, maintain and enforce our intellectual property rights domestically and abroad. The patent position of biotechnology companies is generally highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. The validity, enforceability and commercial value of these rights, therefore, are highly uncertain.

Our patents may not protect us against our competitors. The issuance of a patent is not conclusive as to its scope, validity or enforceability. The scope, validity or enforceability of our patents can be challenged in litigation. Such litigation can involve substantial costs and distraction. If the outcome of such litigation is adverse to us, third parties may be able to use our patented inventions and compete directly with us, without payment to us. Third parties may also be able to circumvent our patents by design innovations. We may not receive any additional patents based on the applications currently pending.

Because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing or, in some cases, not at all, and because publications of discoveries in the scientific literature often lag behind actual discoveries, neither we nor our licensors or collaborators can be certain that we or they were the first to make the inventions claimed in patents or pending patent applications, or that we or they were the first to file for protection of the inventions set forth in these patent applications. Assuming the other requirements for patentability are met, in the United States, the first to make the claimed invention is entitled to the patent, and outside the United States, the first to file is entitled to the patent.

Many of the proteins that are the APIs in our product candidates are off-patent. Therefore, we have obtained and are seeking to obtain patents directed to novel compositions of matter, formulations, methods of manufacturing and methods of treatment to protect some of our products. Such patents may not, however, prevent our competitors from developing products using the same APIs but different technology that is not covered by our patents.

If third parties successfully assert that we have infringed their patents and proprietary rights or challenge the validity of our patents and proprietary rights, we may become involved in intellectual property disputes and litigation that would be costly, time consuming, and delay or prevent the development or commercialization of our product candidates.

Our ability to commercialize our product candidates depends on our ability to develop, manufacture, market and sell our product candidates without infringing the proprietary rights of third parties. Third parties may allege our product candidates infringe their intellectual property rights. Numerous United States and foreign patents and pending patent applications, which are owned by third parties, exist in fields that relate to our product candidates and our underlying technology, including patents and patent applications claiming compositions of matter of, methods of manufacturing, and methods of treatment using, specific proteins, combinations of proteins, and protein crystals.

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For example, we are aware of three issued European patents that may be relevant to our development and commercialization of ALTU-135. However, we believe that, if these patents were asserted against us, it is likely that we would not be found to infringe any valid claim of the patents relevant to our development and commercialization of ALTU-135. If any of these patents were asserted against us and determined to be valid and construed to cover ALTU-135, our development and commercialization of ALTU-135 could be materially adversely affected in Europe. With respect to one of these patents, Dr. Falk, which holds a license from us to commercialize ALTU-135 in Europe, has asserted that we would be liable for damages to Dr. Falk if the patent were successfully asserted against us. We do not believe that Dr. Falk s assertion has merit, and we are in discussions with Dr. Falk concerning this matter. The outcome of these discussions is uncertain.

We are also aware of an issued United States patent, and its foreign counterparts, that may be relevant to our development and commercialization of ALTU-238. We believe that, if this patent and its foreign counterparts were asserted against us, it is likely that we would not be found to infringe any valid claim of the patents relevant to our development and commercialization of ALTU-238. If this patent and its foreign counterparts were determined to be valid and construed to cover ALTU-238, our development and commercialization of ALTU-238 could be materially adversely affected.

We may not succeed in any action in which the patents are asserted against us. In order to successfully challenge the validity of any United States patent, we would need to overcome a presumption of validity. This burden is a high one requiring clear and convincing evidence. If any of these patents were found to be valid and we were found to infringe any of them, or any other patent rights of third parties, we would be required to pay damages, stop the infringing activity or obtain licenses in order to use, manufacture or sell our product candidates. Any required license might not be available to us on acceptable terms, or at all. If we succeeded in obtaining these licenses, payments under these licenses would reduce any earnings from our products. In addition, some licenses might be non-exclusive and, accordingly, our competitors might gain access to the same technology as that which was licensed to us. If we failed to obtain a required license or were unable to alter the design of our product candidates to make the licenses unnecessary, we might be unable to commercialize one or more of our product candidates, which could significantly affect our ability to establish and grow our commercial business.

In order to protect or enforce our patent rights, defend our activities against claims of infringement of third-party patents, or to satisfy contractual obligations to licensees of our own intellectual property, we might be required to initiate patent litigation against third parties, such as infringement suits or nullity, opposition or interference proceedings. We and our collaborators may enforce our patent rights under the terms of our major collaboration and license agreements, but neither is required to do so. In addition, others may sue us for infringing their patent rights or file nullity, opposition or interference proceedings against our patents, even if such claims are without merit.

Intellectual property litigation is relatively common in our industry and can be costly. Even if we prevail, the cost of such litigation could deplete our financial resources. Litigation is also time consuming and could divert management s attention and resources away from our business. Furthermore, during the course of litigation, confidential information may be disclosed in the form of documents or testimony in connection with discovery requests, depositions or trial testimony. Disclosure of our confidential information and our involvement in intellectual property litigation could materially adversely affect our business. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could significantly limit our ability to continue our operations.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. While we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have inadvertently or otherwise used or disclosed intellectual property, trade secrets or other proprietary information of any such employee s former

employer. Litigation may be necessary to defend against these claims and, even if we are successful in defending ourselves, could result in substantial costs or be distracting to management. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel.

If we are unable to protect our trade secrets, we may be unable to protect our interests in proprietary technology, processes and know-how that is not patentable or for which we have elected not to seek patent protection.

In addition to patented technology, we rely upon unpatented proprietary technology, processes and know-how, including particularly our manufacturing know-how relating to the production of the crystallized proteins used in the formulation of our product candidates. In an effort to protect our unpatented proprietary technology, processes and know-how, we require our employees, consultants, collaborators, contract manufacturers and advisors to execute confidentiality agreements. These agreements, however, may not provide us with adequate protection against improper use or disclosure of confidential information, in particular as we are required to make such information available to a larger pool of people as we seek to increase production of our product candidates and their component proteins. These agreements may be breached, and we may not become aware of, or have adequate remedies in the event of, any such breach. In addition, in some situations, these agreements may conflict with, or be subject to, the rights of third parties with whom our employees, consultants, collaborators, contract manufacturers or advisors have previous employment or consulting relationships. Also, others may independently develop substantially equivalent technology, processes and know-how or otherwise gain access to our trade secrets. If we are unable to protect the confidentiality of our proprietary technology, processes and know-how, competitors may be able to use this information to develop products that compete with our products, which could adversely impact our business.

If we fail to comply with our obligations in the agreements under which we license development or commercialization rights to products or technology from third parties, we could lose license rights that are important to our business or incur financial obligations based on our exercise of such license rights.

Several of our collaboration agreements provide for licenses to us of technology that is important to our business, and we may enter in additional agreements in the future that provide licenses to us of valuable technology. These licenses impose, and future licenses may impose, various commercialization, milestone and other obligations on us. If we fail to comply with these obligations, the licensor may have the right to terminate the license even where we are able to achieve a milestone or cure a default after a date specified in an agreement, in which event we would lose valuable rights and our ability to develop our product candidates. For example, under the terms of our strategic alliance agreement with CFFTI, we granted CFFTI an exclusive license under our intellectual property rights covering ALTU-135 and specified derivatives for use in all applications and indications in North America, and CFFTI granted us back an exclusive sublicense of the same scope, including the right to grant sublicenses. CFFTI has the right to retain its exclusive license and terminate our sublicense if we fail to meet specified development milestones, there occurs an unresolved deadlock under the agreement and we discontinue our development activities, there occurs a material default in our obligations under the agreement not cured on a timely basis, including a failure to make required license fee payments to CFFTI on a timely basis if ALTU-135 is approved by the FDA, or a bankruptcy or similar proceeding is filed by or against us. The retention by CFFTI of its exclusive license to ALTU-135 and termination of our sublicense would have a material adverse effect on our business.

In addition, we rely on Amano s intellectual property relating to the manufacturing process used to produce the APIs for ALTU-135, as well as upon technology jointly developed by us and Amano related to the production of those enzymes. If Amano elects not to be our sole commercial supplier of APIs for ALTU-135, Amano is required to grant a license to us of its proprietary technology and its rights under technology jointly developed during our collaboration, which we may sublicense to contract manufacturers we mutually select. Our agreement with Amano requires us to pay Amano a royalty based

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on the cost of the materials supplied to us by other contract manufacturers. If we were to breach our agreement with Amano, we would be required to pay Amano a royalty based on net sales of ALTU-135 to retain our rights to Amano s independently and jointly-developed process technology.

Risks Related to Our Employees and Growth

Our future success depends on our ability to retain our chief executive officer, our chief scientific officer and other key executives and to attract, retain and motivate qualified personnel.

We are a small company with 102 employees as of December 31, 2005. Our success depends on our ability to attract, retain and motivate highly qualified management and scientific personnel. In particular, we are highly dependent on Sheldon Berkle, our President and Chief Executive Officer, Dr. Alexey L. Margolin, our Chief Scientific Officer, and the other principal members of our executive and scientific teams. All of the arrangements with these principal members of our executive and scientific teams may be terminated by us or the employee at any time without notice. Although we do not have any reason to believe that we may lose the services of any of these persons in the foreseeable future, the loss of the services of any of these persons might impede the achievement of our research, development and commercialization objectives.

Recruiting and retaining qualified scientific personnel and possibly sales and marketing personnel will also be critical to our success. We may not be able to attract and retain these personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific personnel from universities and research institutions. We do not maintain key person insurance on any of our employees other than on Dr. Margolin. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research, clinical development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us.

We expect to expand, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

We expect to experience significant growth in the number of our employees and the scope of our operations over the next several years. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, and continue to recruit and train additional qualified personnel. Due to our limited resources, we may not be able to effectively manage the expansion of our operations or to recruit and train additional qualified personnel. The physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

Risks Related to Our Common Stock and This Offering

Our stock price is likely to be volatile and the market price of our common stock after this offering may drop below the price you pay.

You should consider an investment in our common stock as risky and invest only if you can withstand a significant loss and wide fluctuations in the market value of your investment. Prior to this offering, there was not a public market for our common stock. We will negotiate and determine the initial public offering price with the representatives of the underwriters based on several factors. This price may vary from the market price of our common stock after this offering. You may be unable to sell your shares of common stock at or above the initial public offering price due to fluctuations in the market price of our common stock arising from changes in our operating performance or prospects. In addition, the stock market has recently experienced significant volatility, particularly with respect to pharmaceutical, biotechnology and other life sciences company stocks. The volatility of pharmaceutical, biotechnology and other life sciences company stocks often does not relate to the operating performance of the companies

represented by the stock. Some of the factors that may cause the market price of our common stock to fluctuate include:

- results of clinical trials or studies for our product candidates;
- our entry into or the loss of a significant collaboration;
- results of clinical trials conducted by others on drugs that would compete with our product candidates;
- failure or delays in advancing product candidates from our preclinical programs, or other product candidates we may discover or acquire in the future, into clinical trials;
- failure or discontinuation of any of our research programs;
- delays or other problems with manufacturing our product candidates or approved products;
- regulatory developments or enforcement in the United States and foreign countries;
- developments or disputes concerning patents or other proprietary rights;
- introduction of technological innovations or new commercial products by us or our competitors;
- changes in estimates or recommendations by securities analysts, if any, who cover our common stock;
- failure to meet estimates or recommendations by securities analysts, if any, who cover our common stock;
- public concern over our product candidates or any approved products;
- litigation;
- future sales or anticipated sales of our common stock by us or our stockholders;
- general market conditions;
- changes in the structure of health care payment systems;
- failure of any of our product candidates, if approved, to achieve commercial success;
- economic and other external factors or other disasters or crises; and
- period-to-period fluctuations in our financial results.

These and other external factors may cause the market price and demand for our common stock to fluctuate substantially, which may limit or prevent investors from readily selling their shares of common stock and may otherwise negatively affect the liquidity of our common stock. In addition, in the past, when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit regardless of the outcome. Such a lawsuit could also divert the time and attention of our management.

There may not be an active, liquid trading market for our common stock.

This is our initial public offering, and there is currently no established trading market for our common stock. There is no guarantee that an active trading market for our common stock will develop and be maintained after this offering. If a trading market does not develop or is not maintained, you may experience difficulty in reselling, or an inability to sell, your shares quickly or at the latest market price.

Insiders will continue to have substantial control over Altus which could delay or prevent a change in corporate control or result in the entrenchment of management and the board of directors.

After this offering, our directors and executive officers, together with their affiliates and related persons, will beneficially own, in the aggregate, approximately 51% of our outstanding common stock. As a result, these stockholders, if acting together, may have the ability to determine the outcome of matters submitted to our stockholders for approval, including the election and removal of directors and any

merger, consolidation or sale of all or substantially all of our assets. In addition, these persons, acting together, may have the ability to control the management and affairs of our company. Accordingly, this concentration of ownership may harm the market price of our common stock by:

- delaying, deferring or preventing a change in control;
- entrenching our management and the board of directors;
- impeding a merger, consolidation, takeover or other business combination involving Altus; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of Altus.

After the closing of this offering, entities affiliated with Warburg Pincus Private Equity VIII, L.P., or Warburg Pincus, one of our principal stockholders, are entitled to designate up to two individuals as candidates to our board of directors, for so long as Warburg Pincus owns at least 2,691,935 shares of our common stock, or one individual for so long as Warburg Pincus owns at least 1,794,623 shares of our common stock. We have agreed to nominate and use our reasonable efforts to cause the election of such candidates. Currently, Stewart Hen and Jonathan S. Leff are the members of our board of directors designated by Warburg Pincus.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. After this offering, we will have outstanding 21,001,943 shares of common stock based on the number of shares outstanding as of December 31, 2005. This includes the 7,000,000 shares that we are selling in this offering, which may be resold in the public market immediately. Of the remaining shares, 13,536,932 shares are currently restricted as a result of securities laws or lock-up agreements but will be able to be sold after the offering as described in the Shares Eligible for Future Sale section of this prospectus. Moreover, after this offering, holders of an aggregate of 12,666,153 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. We also intend to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to the lock-up agreements described in the Underwriting section of this prospectus.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Management will retain broad discretion over the use of the net proceeds from this offering. Stockholders may not agree with such uses, and our use of the proceeds may not yield a significant return or any return at all for our stockholders. The failure by our management to apply these funds effectively could have a material adverse effect on our business.

We intend to use the proceeds from this offering for clinical activities, including clinical supplies, preclinical research and development activities, general and administrative expenses, working capital needs and other general corporate purposes, including capital expenditures. Because of the number and variability of factors that will determine our use of the proceeds from this offering, their ultimate use may vary substantially from their currently intended use. For a further description of our intended use of the proceeds of this offering, see the Use of Proceeds section of this prospectus.

Provisions of our charter, bylaws, and Delaware law may make an acquisition of us or a change in our management more difficult.

Certain provisions of our restated certificate of incorporation and restated bylaws that will be in effect upon the completion of this offering could discourage, delay or prevent a merger, acquisition or other change in control that

stockholders may consider favorable, including transactions in which you might

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otherwise receive a premium for your shares. These provisions also could limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. Stockholders who wish to participate in these transactions may not have the opportunity to do so. Furthermore, these provisions could prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions:

- allow the authorized number of directors to be changed only by resolution of our board of directors;
- establish a classified board of directors, such that not all members of the board be elected at one time;
- authorize our board of directors to issue without stockholder approval blank check preferred stock that, if issued, could operate as a poison pill to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that is not approved by our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit stockholder action by written consent;
- establish advance notice requirements for stockholder nominations to our board of directors or for stockholder proposals that can be acted on at stockholder meetings;
- limit who may call stockholder meetings; and
- require the approval of the holders of 80% of the outstanding shares of our capital stock entitled to vote in order to amend certain provisions of our restated certificate of incorporation and restated bylaws.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which may, unless certain criteria are met, prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a prescribed period of time.

Investors in this offering will pay a much higher price than the book value of our common stock and therefore you will incur immediate and substantial dilution of your investment.

If you purchase common stock in this offering, you will pay more for your shares than the amounts paid by existing stockholders for their shares. You will incur immediate and substantial dilution of $9.73 per share, representing the difference between the initial public offering price and our pro forma net tangible book value per share after giving effect to this offering at the initial public offering price of $15.00 per share. Further, investors purchasing common stock in this offering will contribute approximately 45% of the total amount invested by stockholders since our inception, but will only own approximately 33% of the shares of common stock outstanding. In the past, we also issued options and warrants to acquire common stock at prices significantly below the initial public offering price. To the extent these outstanding options or warrants are ultimately exercised, you will sustain further dilution.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. The forward-looking statements are contained principally in, but not limited to, the sections entitled Prospectus Summary, Risk Factors, Management s Discussion and Analysis of Financial Condition and Results of Operations and Business. These statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements include, but are not limited to, statements about:

- the expected timing, progress or success of our preclinical research and development and clinical programs;
- the potential benefits of our product candidates over other therapies;
- the timing, costs and other limitations involved in obtaining regulatory approval for any of our product candidates;
- our ability to enter into any collaboration with respect to product candidates;
- our ability to market, commercialize and achieve market acceptance for any of our product candidates that we are developing or may develop in the future;
- our ability to protect our intellectual property and operate our business without infringing upon the intellectual property rights of others;
- our estimates of market sizes and anticipated uses of our product candidates;
- our estimates of future performance; and
- our estimates regarding anticipated operating losses, future revenue, expenses, capital requirements and our needs for additional financing.

In some cases, you can identify forward-looking statements by terms such as anticipates, believes, could, estimates, expects, intends, may, plans, potential, predicts, projects, should, will, would and si intended to identify forward-looking statements. Forward-looking statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Because of these risks and uncertainties, the forward-looking events and circumstances discussed in this prospectus may not transpire. We discuss many of these risks in this prospectus in greater detail under the heading Risk Factors beginning on page 7.

Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, forward-looking statements represent our estimates and assumptions only as of the date of this prospectus. You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement of which this prospectus forms a part completely and with the understanding that our actual future results may be materially different from what we expect. Except as required by law, we do not undertake any obligation to update or revise any forward-looking statements contained in this prospectus, whether as a result of new information, future events or otherwise.

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USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of 7,000,000 shares of our common stock in this offering will be approximately $95.3 million, based upon the initial public offering price of $15.00 per share, after deducting underwriting discounts and commissions and the estimated offering expenses payable by us. If the underwriters exercise their overallotment option in full, we estimate the net proceeds to us from this offering will be approximately $109.9 million.

We currently intend to use the net proceeds of this offering as follows:

- approximately $37 million to fund a portion of ALTU-135 development activities, including a Phase III clinical trial and long-term safety study for the solid form of ALTU-135, a Phase II clinical trial for the liquid form of ALTU-135, and related toxicology studies and manufacturing and materials costs;

- approximately $30 million to fund a portion of ALTU-238 development activities, including a Phase III clinical trial in adults, a Phase II/III clinical trial in children, and related toxicology studies and manufacturing and materials costs; and

- the remainder to fund research and development activities for our preclinical product candidates and general corporate purposes, including capital expenditures and working capital.

This expected use of net proceeds of this offering represents our current intentions based upon our present plans and business conditions. The amounts and timing of our actual expenditures depend on numerous factors, including the ongoing status of and results from clinical trials and other studies for ALTU-135 and ALTU-238, as well as the development of our preclinical product pipeline, any collaborations we may enter into with third parties for our product candidates and any unforeseen cash needs. As a result, management will retain broad discretion over the allocation of the net proceeds from this offering. We do not expect the net proceeds from this offering and our other available funds to be sufficient to fund the completion of the development of any of our product candidates, and we expect that we will need to raise additional funds prior to being able to market any products. We have no current plans, agreements or commitments for acquisitions of any businesses, products or technologies.

Pending use of the net proceeds of this offering, we intend to invest the net proceeds in accordance with our investment policy guidelines, which currently provide for investment of funds in cash equivalents, United States government obligations, high grade and corporate notes and commercial paper.

DIVIDEND POLICY

We have never paid or declared any cash dividends on our common stock and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. In addition, the terms of our redeemable preferred stock prohibit us from declaring and paying dividends on our common stock until we have paid all accrued but unpaid dividends on our redeemable preferred stock. We intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business.

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CAPITALIZATION

The following table describes our unaudited cash position and our unaudited capitalization as of September 30, 2005:

- on an actual basis;
- on a pro forma basis to reflect the conversion of all then outstanding shares of our convertible preferred stock into an aggregate of 10,767,306 shares of common stock, which will occur automatically upon the closing of this offering, and the issuance of 1,391,828 shares of common stock upon the closing of this offering in satisfaction of accumulated dividends on our Series B and C convertible preferred stock; and
- on a pro forma as adjusted basis to adjust the pro forma balances to reflect the sale of 7,000,000 shares of common stock by us in this offering at the initial public offering price of $15.00 per share and our receipt of the estimated net proceeds of that sale, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table together with Management s Discussion and Analysis of Financial Condition and Results of Operations and our consolidated financial statements and the related notes thereto appearing elsewhere in this prospectus.

	As of September 30, 2005		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands, except share and per share amounts)		
Cash and cash equivalents and short-term investments	$ 32,009	$ 32,009	$ 127,309
Long-term debt and capital lease obligations, net of current portion	$ 4,210	$ 4,210	$ 4,210
Redeemable preferred stock:			
Redeemable preferred stock, par value $0.01 per share; 450,000 shares authorized, issued and outstanding actual, pro forma and pro forma as adjusted (liquidation value of $6,000 at September 30, 2005), shown at accreted redemption value	5,779	5,779	5,779
Series B convertible preferred stock, par value $0.01 per share; 12,928,155 shares authorized actual; 11,773,609 shares issued and outstanding actual (liquidation value of $62,852 at September 30, 2005), shown at accreted redemption value	61,033		
Series C convertible preferred stock, par value $0.01 per share; 14,420,359 shares authorized actual; 11,819,959 shares issued and outstanding actual (liquidation value of $58,307 at September 30, 2005), shown at accreted	49,822		

redemption value			
Stockholders (deficit) equity(1):			
Series A convertible preferred stock, par value $0.01 per share; 87,500 shares authorized, issued and outstanding actual (liquidation value of $4 at September 30, 2005)	897		
Common stock, par value $0.01 per share; 47,113,986 shares authorized actual; 100,000,000 shares authorized pro forma and pro forma as adjusted; 1,820,161 shares issued and outstanding actual; 13,979,295 shares issued and outstanding pro forma; and 20,979,295 shares issued and outstanding pro forma as adjusted(2)	18	140	210

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	As of September 30, 2005		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands, except share and per share amounts)		
Additional paid-in capital	16,687	128,317	223,547
Accumulated deficit	(112,119)	(112,119)	(112,119)
Total stockholders (deficit) equity	(94,517)	16,338	111,638
Total capitalization	$ 26,327	$ 26,327	$ 121,627

(1) On a pro forma as adjusted basis, excludes 4,550,000 additional shares of preferred stock, par value $0.01 per share, to be authorized upon filing of the restated certificate of incorporation immediately following the closing of this offering, in addition to the 450,000 shares of redeemable preferred stock that will be authorized, issued and outstanding as set forth above.

(2) Excludes:
3,034,111 shares of common stock issuable upon the exercise of options outstanding as of September 30, 2005 at a weighted average exercise price of $4.04 per share;

4,121,189 shares of common stock issuable upon exercise of warrants outstanding as of September 30, 2005 at a weighted average exercise price of $7.17 per share; and

an aggregate of 342,380 shares available for future issuances under our 2002 Director, Employee and Consultant Stock Plan as of September 30, 2005.

Between October 1, 2005 and December 31, 2005, we issued additional options to purchase up to 249,236 shares of common stock at a weighted average exercise price of $6.95 per share, and options to purchase 22,653 shares of common stock were exercised.

The terms of our existing Series B and C convertible preferred stock require us, upon the closing of this offering, to issue additional shares of common stock to the holders of such preferred stock in satisfaction of accumulated dividends on such preferred stock. The accumulated dividends will be $20.9 million at January 31, 2006, the expected closing date of this offering. Based on the initial public offering price of $15.00 per share, we will issue 1,391,828 additional shares of common stock in satisfaction of such dividends.

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DILUTION

Our historical net tangible book value (deficit) as of September 30, 2005 was $(96.5) million or $(53.01) per share of common stock, based on 1,820,161 shares of common stock outstanding as of September 30, 2005, as adjusted to reflect the 1-for-2.293 reverse split of our common stock effected in January 2006. Historical net tangible book value (deficit) per share is determined by dividing our total tangible assets less total liabilities and redeemable preferred stock by the actual number of shares of common stock outstanding. Our pro forma net tangible book value as of September 30, 2005 was $15.3 million, or $1.09 per share of common stock, based on 13,979,295 shares of common stock outstanding after giving effect to the conversion of all of our convertible preferred stock into 10,767,306 shares of common stock upon the closing of this offering and the issuance of 1,391,828 shares of common stock upon the closing of this offering in satisfaction of accumulated dividends on our Series B and C convertible preferred stock. Pro forma net tangible book value per share is determined by dividing our total tangible assets less total liabilities and redeemable preferred stock by the pro forma number of shares of common stock outstanding at September 30, 2005 before giving effect to our sale of shares of common stock in this offering.

After giving effect to our sale of 7,000,000 shares of common stock in this offering, at the initial public offering price of $15.00 per share, less the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2005 would have been $110.6 million, or $5.27 per share. This represents an immediate increase in pro forma net tangible book value of $4.18 per share to existing stockholders and an immediate dilution of $9.73 per share to new investors. Dilution per share represents the difference between the amount per share paid by purchasers of shares of our common stock in this offering and the net tangible book value per share of our common stock immediately afterwards, after giving effect to the sale of 7,000,000 shares in this offering at the initial public offering price of $15.00 per share and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

The following table illustrates this per share dilution:

Initial public offering price per share		$ 15.00
Historical net tangible book value (deficit) per share as of September 30, 2005	$ (53.01)	
Pro forma increase per share attributable to pro forma conversion of convertible preferred stock and issuance of shares of common stock in satisfaction of accumulated dividends on Series B and C convertible preferred stock	$ 54.10	
Pro forma net tangible book value per share as of September 30, 2005, before this offering	$ 1.09	
Increase per share attributable to this offering	$ 4.18	
Pro forma as adjusted net tangible book value per share as of September 30, 2005, after this offering		$ 5.27
Dilution per share to new investors in this offering		$ 9.73

If the underwriters exercise their overallotment option in full to purchase 1,050,000 additional shares of common stock in this offering, the pro forma as adjusted net tangible book value per share after the offering would be $5.68 per share, the increase in the pro forma net tangible book value per share to existing stockholders would be $4.59 per share and the dilution to new investors purchasing common stock in this offering would be $9.32 per share.

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The following table summarizes as of September 30, 2005, on the pro forma basis described above, the total number of shares of common stock purchased from us and the total consideration and the average price per share paid by existing shareholders and by new investors, calculated before deduction of the underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	13,979,295	67%	$ 129,817,311	55%	$ 9.29
New investors	7,000,000	33	105,000,000	45	15.00
Total	20,979,295	100%	$ 234,817,311	100%	

The number of shares of common stock outstanding in the table above is based on the number of shares outstanding as of September 30, 2005 and assumes no exercise of the underwriters overallotment option to purchase up to an additional 1,050,000 shares of common stock. If the underwriters overallotment option is exercised in full, the number of shares of common stock held by existing stockholders will be reduced to 63% of the total number of shares of common stock outstanding after this offering and the number of shares of common stock held by new investors will be increased to 8,050,000, or 37% of the total number of shares of common stock outstanding after this offering.

The information also assumes no exercise of any outstanding stock options or warrants. As of September 30, 2005, there were 3,034,111 shares of common stock reserved for issuance upon the exercise of outstanding options at a weighted average exercise price of $4.04 per share, and 4,121,189 shares of common stock reserved for issuance upon the exercise of outstanding warrants at a weighted average exercise price of $7.17 per share. If all of these options and warrants had been exercised as of September 30, 2005, pro forma as adjusted net tangible book value per share after this offering would be $5.42 and total dilution per share to new investors would be $9.58. In addition, options to purchase 249,236 shares of common stock were granted between October 1, 2005 and December 31, 2005 at a weighted average exercise price of $6.95 per share. To the extent that any of these options or warrants are exercised, there will be further dilution to new investors. In addition, many of the warrants that we have issued contain anti-dilution provisions that will result in the issuance of additional shares of common stock upon exercise, and thus further dilution, if we issue or are deemed to issue equity at a per share price less than the exercise price of the warrants.

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SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with Management s Discussion and Analysis of Financial Condition and Results of Operations and other financial data included elsewhere in this prospectus. The consolidated statements of operations data for the years ended December 31, 2002, 2003 and 2004 and the consolidated balance sheet data as of December 31, 2003 and 2004 are derived from our audited consolidated financial statements appearing elsewhere in this prospectus. The consolidated statements of operations data for the years ended December 31, 2000 and 2001 and the consolidated balance sheet data as of December 31, 2000, 2001 and 2002 are derived from our audited consolidated financial statements not included in this prospectus. The consolidated statements of operations data for the nine months ended September 30, 2004 and 2005 and the consolidated balance sheet data as of September 30, 2005 have been derived from our unaudited consolidated financial statements included elsewhere in this prospectus. In the opinion of management, these unaudited consolidated financial statements have been prepared on a basis consistent with the audited financial statements and include all adjustments, consisting of normal and recurring adjustments, necessary for a fair presentation of the results for these periods and as of such date. Historical results are not necessarily indicative of operating results to be expected in the future.

The pro forma basic and diluted net loss per common share data for the year ended December 31, 2004 and the nine months ended September 30, 2005 reflect the mandatory conversion, upon the closing of this offering, of the Series A, B and C convertible preferred stock at their respective conversion rates into our common stock and the issuance of shares of common stock in satisfaction of the accumulated dividends on the Series B and C convertible preferred stock through the end of the applicable period based on the initial public offering price of $15.00 per share, as if the conversion had occurred at the dates of original issuance.

	Year Ended December 31,					Nine Months Ended September 30,	
	2000	2001	2002	2003	2004	2004	2005
	(in thousands, except per share amounts)						
Consolidated Statements of Operations Data:							
Revenue:							
Contract revenue	$ 5,685	$ 4,995	$ 1,885	$ 2,613	$ 4,045	$ 2,891	$ 6,727
Product sales	610	1,130	483	1,268	185	185	
Total revenue	6,295	6,125	2,368	3,881	4,230	3,076	6,727
Operating expenses:							
Cost of product sales	282	709	241	578	87	87	
Research and development	3,495	7,235	13,174	13,282	19,095	11,995	19,792
General, sales and administrative	3,645	4,236	6,859	5,533	6,320	4,623	6,003
Non-cash contract modification expense(1)		759					
Total operating expenses	7,422	12,939	20,274	19,393	25,502	16,705	25,795
Loss from operations	(1,127)	(6,814)	(17,906)	(15,512)	(21,272)	(13,629)	(19,068)

Interest income	91	284	853	405	646	405	701
Interest expense	(288)	(275)	(156)	(251)	(469)	(351)	(617)
Other (expense) income, net			(81)	164	138	138	(125)
Net loss	(1,324)	(6,805)	(17,290)	(15,194)	(20,957)	(13,437)	(19,109)
Preferred stock dividends and accretion	(401)	(1,319)	(4,905)	(4,905)	(8,588)	(5,845)	(8,169)
Net loss attributable to common stockholders	$ (1,725)	$ (8,124)	$ (22,195)	$ (20,099)	$ (29,545)	$ (19,282)	$ (27,278)
Basic and diluted net loss per common share	$ (1.39)	$ (5.94)	$ (13.16)	$ (11.92)	$ (17.33)	$ (11.34)	$ (15.84)
Shares used in computing basic and diluted net loss per common share	1,239	1,367	1,687	1,687	1,704	1,700	1,722
Pro forma basic and diluted net loss per common share					$ (1.96)		$ (1.46)
Shares used in computing pro forma basic and diluted net loss per common share					10,915		13,328

footnote on following page

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(1) Non-cash contract modification expense reflects the fair value of warrants issued to CFFTI and warrants held by Vertex that were repriced in conjunction with the sale of the Series B convertible preferred stock in 2001. We granted warrants to CFFTI to purchase 87,221 shares of our common stock at an exercise price of $0.02 per common share as consideration for modifying specified terms and provisions of our collaboration agreement. In addition, we reduced the exercise price for warrants to purchase 1,962,494 shares of our common stock held by Vertex to $5.64 per share.

	As of December 31,					As of September 30,
	2000	2001	2002	2003	2004	2005
	(in thousands)					
Consolidated Balance Sheet Data:						
Cash and cash equivalents and short-term investments	$ 1,354	$ 43,008	$ 31,808	$ 22,636	$ 52,638	$ 32,009
Working capital	69	39,299	30,020	16,817	41,612	22,302
Total assets	3,419	47,105	41,792	29,117	62,824	44,171
Deferred revenue		1,337	9,888	12,865	10,617	10,426
Long-term debt, net of current portion	779	47	1,664	1,964	3,821	4,210
Redeemable preferred stock	3,870	48,420	53,325	58,230	108,465	116,634
Total stockholders deficit	(4,023)	(6,176)	(27,920)	(47,627)	(68,112)	(94,517)

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

You should read the following discussion and analysis of financial condition and results of operations together with the section entitled Selected Consolidated Financial Data and our consolidated financial statements and related notes appearing elsewhere in this prospectus. In addition to historical financial information, the following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this prospectus, particularly in the section entitled Risk Factors.

Overview

We are a biopharmaceutical company focused on the development and commercialization of oral and injectable protein therapeutics for chronic gastrointestinal and metabolic disorders, with two product candidates in clinical development. We are using our proprietary protein crystallization technology to develop protein therapies, which we believe will have significant advantages over existing products or will address unmet medical needs. Our product candidates are designed to either increase the amount of a protein that is in short supply in the body or degrade and remove toxic metabolites from the blood stream. Our two lead product candidates are: ALTU-135, for which we have completed a Phase II clinical trial in cystic fibrosis patients for the treatment of malabsorption due to exocrine pancreatic insufficiency, and ALTU-238, for which we are currently conducting a Phase II clinical trial in adults for the treatment of growth hormone deficiency. We also have a pipeline of other product candidates in preclinical research and development. We have generated significant losses as we have progressed our lead product candidates into clinical development and expect to continue to generate losses as ALTU-135 and ALTU-238 move into later stages of clinical development. As of September 30, 2005, we had an accumulated deficit of $112.1 million.

Financial Operations Overview

Revenue. Our contract revenue consists primarily of amounts earned under collaborative research and development agreements relating to ALTU-135 with CFFTI and Dr. Falk.

In February 2001, we entered into a strategic alliance agreement with CFFTI to collaborate on the development of ALTU-135 and specified derivatives of ALTU-135 in North America for the treatment of malabsorption due to exocrine pancreatic insufficiency in patients with cystic fibrosis and other indications. The agreement, in general terms, provides us with funding from CFFTI for a portion of the development costs of ALTU-135 upon the achievement of specified development milestones, up to a total of $25.0 million, in return for specified payment obligations and our obligation to use good faith reasonable efforts to develop and bring ALTU-135 to market in North America. As of September 30, 2005, we had received a total of $15.9 million of the $25.0 million available under the CFFTI agreement and recognized cumulative revenue of $8.9 million. We received an additional $2.5 million in December 2005 as a result of the delivery to CFFTI of the data from our recently completed Phase II clinical trial of ALTU-135. In addition, we may receive an additional milestone payment of $6.6 million, less an amount determined by when we achieve the milestone.

If we are successful in obtaining FDA approval of ALTU-135, we will be required to pay CFFTI a license fee equal to the aggregate amount of milestone payments we have received from CFFTI, plus interest, up to a maximum of $40.0 million, less the fair market value of the shares of stock underlying the warrants we issued to CFFTI. This fee, plus interest on the unpaid balance, will be due in four annual installments, commencing 30 days after the approval date. We are also required to pay an additional $1.5 million to CFFTI within 30 days after the approval date. In addition, we are obligated to pay royalties to CFFTI consisting of a percentage of worldwide net sales by us or our sublicensees of ALTU-135 for any and all indications until the expiration of specified United States patents covering ALTU-135. We have the option to terminate our ongoing royalty obligation by making a one-time payment to CFFTI, but

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we currently do not expect to do so. Under the agreement, CFFTI has also agreed to provide us with reasonable access to its network of medical providers, patients, researchers and others involved in the care and treatment of cystic fibrosis patients, and to use reasonable efforts to promote the involvement of these parties in the development of ALTU-135.

In connection with the execution of the agreement and the first amendment of the agreement, we have issued to CFFTI warrants to purchase a total of 261,664 shares of our common stock at an exercise price of $0.02 per share, including 174,443 warrants with a fair value of $1.7 million issued upon execution of the agreement in February 2001. The fair value of the 174,443 warrants is being recognized as a discount to contract revenue and amortized against the gross revenue earned under the contract. As of September 30, 2005, approximately $1.1 million remains to be amortized against future revenues under the agreement.

In December 2002, we entered into a development, commercialization and marketing agreement with Dr. Falk for the development by us of ALTU-135 and the commercialization by Dr. Falk of ALTU-135, if approved, in Europe, the countries of the former Soviet Union, Israel and Egypt. Under the agreement, we granted Dr. Falk an exclusive, sublicensable license under specified patents that cover ALTU-135 to commercialize ALTU-135 for the treatment of symptoms caused by exocrine pancreatic insufficiency. As of September 30, 2005, we had received upfront and milestone payments from Dr. Falk under the agreement totaling 7.0 million, which equated to $8.1 million based on exchange rates in effect at the times we received the milestone payments, and recognized cumulative revenue of $6.5 million. We received an additional 4.0 million in December 2005, which equated to $4.7 million based on the exchange rate in effect at the time, as a result of the delivery to Dr. Falk of the final report from our recently completed Phase II clinical trial of ALTU-135. In addition, Dr. Falk has agreed to pay a portion of the development expenses we incur in connection with the conduct of an international Phase III clinical trial, including costs relating to the process of obtaining regulatory approval, project management costs, statistical design and studies, and preparation of reports. Dr. Falk holds all commercialization and marketing rights in the licensed territory, and we are entitled to receive royalties based on the net sales of ALTU-135 in the licensed territory and revenue for the ALTU-135 capsules supplied by us to Dr. Falk. Under the terms of the agreement, the license to Dr. Falk will continue in each country in the licensed territory until the later of the expiration of the last-to-expire of specified patents that cover ALTU-135 in that country or 12 years from the date of first commercial sale of ALTU-135 in that country.

In addition to contract revenue under our collaborations with CFFTI and Dr. Falk, we also receive research and development funding through grants from various United States government and non-government institutions. Research and development funding generally compensates us for a portion of our development and testing related to collaborative research programs or grants.

Historically, our product sales consisted of revenue from the sale of crystallized enzymes for use as catalysts for the production of small molecule drugs and related development activities for use in pharmaceutical manufacturing processes. We stopped selling these products during the first half of 2004. Accordingly, we do not currently generate revenue from product sales.

Cost of Product Sales. Cost of product sales represents the cost of manufacturing the crystallized enzyme catalysts discussed immediately above and consists primarily of third-party contract manufacturing expenses. For products made internally, the costs consist primarily of payroll and payroll-related expenses, chemicals, supplies and overhead expenses.

Research and Development Expense. Research and development expense consists primarily of expenses incurred in developing and testing product candidates, including:

- salaries and related expenses for personnel, including stock-based compensation expenses;
- fees paid to professional service providers in conjunction with independently monitoring our clinical trials and acquiring and evaluating data in conjunction with our clinical trials;
- performance of non-clinical trials, including toxicity studies in animals;

costs of contract manufacturing services;

costs of materials used in clinical and non-clinical trials; and

depreciation of capital resources used to develop our products and costs of facilities.

We expense research and development costs as incurred.

As of June 30, 2005, we had completed our Phase II clinical trial of ALTU-135 and were designing and preparing for a Phase III clinical trial of the solid form of ALTU-135 and conducting related development activities. In August 2005, we revised our estimate of the total costs we will incur to complete the development of ALTU-135 and file an NDA with the FDA to be approximately $118 million, excluding non-cash compensation expense and depreciation. We may further revise such estimate in the future. As of September 30, 2005, we had incurred approximately $45.2 million of such total costs. We also recently completed a Phase I clinical trial and initiated enrollment in a Phase II clinical trial of ALTU-238. From January 1, 2003, the date on which we began separately tracking development costs for ALTU-238, through September 30, 2005, we incurred approximately $10.8 million in total development costs for this product candidate. We expect our research and development costs to increase substantially in the foreseeable future.

Product candidates in clinical development have higher associated development costs than those in the preclinical stage since the former involve testing on humans while the latter involve shorter-term animal studies. Moreover, as a product candidate moves into later-stage clinical trials, such as from Phase I to Phase II or Phase II to Phase III, the costs are significantly higher due to the increased size and length of the later stage trial.

The successful development of our product candidates is highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and estimated costs of the efforts that will be necessary to complete the remainder of the development of, or the period, if any, in which material net cash inflows will commence from, ALTU-238 or any of our preclinical product candidates. This is due to the numerous risks and uncertainties associated with developing drugs, including the uncertainty of:

the scope, rate of progress and expense of our clinical trials and other research and development activities;

the potential benefits of our product candidates over other therapies;

our ability to market, commercialize and achieve market acceptance for any of our product candidates that we are developing or may develop in the future;

future clinical trial results;

the terms and timing of any collaborative, licensing and other arrangements that we may establish;

the expense and timing of regulatory approvals; and

the expense of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights.

A change in the outcome of any of these variables with respect to the development of a product candidate would mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA or other regulatory authority were to require us to conduct clinical trials beyond those which we currently anticipate will be required for the completion of clinical development of a product candidate or if we experience significant delays in enrollment in any of our clinical trials, we would be required to expend significant additional financial resources and time on the completion of clinical development.

General, Sales and Administrative Expense. General, sales and administrative expense consists primarily of salaries and other related costs for personnel, including stock-based compensation expenses, in

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our executive, sales, marketing, finance, accounting, information technology and human resource functions. Other costs primarily include facility costs not otherwise included in research and development expense, advertising and promotion expenses, trade shows and professional fees for legal services, including patent-related expenses, and accounting services.

We expect that general and administrative expenses will increase in the future due to increased payroll, expanded infrastructure, increased consulting, legal, accounting and investor relations expenses associated with being a public company and costs incurred to seek collaborations with respect to any of our product candidates.

Interest and Other Income (Expense), Net. Interest income consists of interest earned on our cash and cash equivalents and short-term investments. Interest expense consists of interest incurred on capital leases and other debt financings, which are primarily equipment loans. Other income (expense), net consists primarily of foreign currency gains (losses) and a realized loss on investments during the year ended December 31, 2002.

Preferred Stock Dividends and Accretion. Preferred stock dividends and accretion consists of cumulative but undeclared dividends payable and accretion of the issuance costs and warrants, where applicable, on the redeemable preferred stock and Series B and C convertible preferred stock. The issuance costs on these shares and warrants were recorded as a reduction to the carrying value of the preferred stock when issued, and are accreted to preferred stock ratably through December 31, 2010 by a charge to additional paid-in capital and earnings attributable to common shareholders. Upon the completion of this offering, the cumulative but unpaid dividends on the Series B and C convertible preferred stock are payable in shares of common stock at the price of the common stock sold in the offering. Accordingly, upon completion of this offering, we expect that we will no longer record preferred dividends and accretion on the Series B and Series C convertible preferred stock, which will convert into common shares upon completion of this offering. As of September 30, 2005, the cumulative dividends payable on the Series B and C convertible preferred stock totaled $18.3 million.

Critical Accounting Policies and Significant Judgments and Estimates

Our discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements and notes, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. On an ongoing basis, we evaluate our estimates and judgments, including those related to revenue, accrued expenses, deemed fair valuation of stock related to stock-based compensation and income taxes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. A summary of our significant accounting policies is contained in Note 2 to our consolidated financial statements included elsewhere in this prospectus. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue. Our existing collaborative agreements that generate contract revenue relate solely to ALTU-135. We recognize contract revenue under these collaborative agreements using the proportional performance method based on the percentage of costs incurred relative to the total costs estimated to be incurred to complete the program, to the extent such amount is not greater than the cash received. At each reporting period, we review the status of the product candidate in light of the most recently completed development activities and related results and the estimated remaining development costs and, to the extent such estimates change, the impact of such change on revenue is recorded in operations at that time. Significant judgments and estimates are involved in determining the estimated costs to complete the development programs, and different assumptions could yield materially different cost estimates and resulting revenue.

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For the purpose of recognizing revenue, we use an input based measure, specifically direct costs, to determine proportional performance under our collaboration agreements because we believe that for our current agreements the use of an input measure is a more accurate representation of proportional performance than an output based measure, such as milestones. We also believe that the direct cost method most closely reflects the level of effort related to our research and development collaborations. While we have considered using an output based measure, we believe that such an approach would accelerate the recognition of revenue and result in reported revenue that would be disproportionate to the progress made in the earlier stages of development of ALTU-135, where the product development risk is highest, as well as the level of effort over the life of the agreements.

Since the inception of our collaboration agreements with CFFTI and Dr. Falk, we have adjusted our estimated costs to complete the development program for ALTU-135 on three occasions, resulting in cumulative changes in our revenue at each time of the change in the estimate. At the end of 2002 we increased our estimated development costs to complete ALTU-135, resulting in a corresponding reduction of $1.6 million in cumulative revenue in the fourth quarter of 2002. At the end of 2003, we again increased our estimated development costs to complete ALTU-135, resulting in a $2.5 million reduction of our cumulative revenue in the fourth quarter of 2003. During the third quarter of 2005, we reduced our estimated development costs for ALTU-135, which resulted in a $3.3 million increase in our cumulative revenue in the third quarter of 2005. In addition, our agreement with Dr. Falk is denominated in Euros. Accordingly, the impact of fluctuations in exchange rates under collaborative agreements that are denominated in a foreign currency is reflected in deferred revenue at the time the cash is received and in revenue at each reporting period. The possibility exists that revenue may increase or decrease in future periods as estimated costs on the underlying program increase or decrease or as exchange rates impact the value of foreign currency denominated collaborations, without additional cash inflows from the collaborative partner or non-government institution. For example, as of September 30, 2005, if our estimated total development costs for ALTU-135 were to increase by 10%, it would result in a $1.4 million reduction of cumulative revenue. If our estimated total development costs for ALTU-135 were to decrease by 10%, it would result in a $1.7 million increase of cumulative revenue.

Contract amounts which are not due until the customer accepts or verifies the research results are not recognized as revenue until payment is received or the customer s acceptance or verification of the results is evidenced, whichever occurs earlier. Contract revenue recorded under the CFFTI agreement is recognized net of amortization of the fair value of the warrants issued in connection with the execution of the agreement.

Deferred revenue is recorded when payments are received in advance of revenue recognized under collaborative agreements. Since the payments received under the collaborative agreements are non-refundable, the termination of a collaborative agreement prior to its completion could result in an immediate recognition of deferred revenue relating to payments already received from the collaborative partner but not previously recognized as revenue.

Revenue from research and development funding under grants from the United States government and its agencies is recognized as revenue as development costs are incurred and billed in accordance with the terms of the grant. Revenue from product sales is recognized when there is persuasive evidence that an arrangement exists, delivery and, if applicable, acceptance by the customer has occurred, the price is fixed or determinable, and collectibility is reasonably assured.

Accrued Expenses. As part of the process of preparing consolidated financial statements we are required to estimate accrued expenses. This process involves identifying services which have been performed on our behalf and estimating the level of service performed and the associated cost incurred for such service as of each balance sheet date in our consolidated financial statements. Examples of estimated expenses for which we accrue include contract service fees, such as amounts paid to clinical monitors, data management organizations, clinical sites and investigators in conjunction with clinical trials, and fees paid to contract manufacturers in conjunction with the production of materials for clinical and non-clinical trials, and professional service fees. In connection with these service fees, our estimates are most affected

by our understanding of the status and timing of services provided relative to the actual levels of services incurred by such service providers. In the event that we do not identify costs which have begun to be incurred or we under- or over-estimate the level of services performed or the costs of such services, our reported expenses for such period would be too low or too high, and revenue may be overstated or understated to the extent such expenses relate to collaborations accounted for using the proportional performance method. The date on which specified services commence, the level of services performed on or before a given date and the cost of such services is often judgmental. We attempt to mitigate the risk of inaccurate estimates, in part, by communicating with our service providers when other evidence of costs incurred is unavailable.

Stock-Based Compensation. On January 1, 2002, we adopted the fair value method to record stock-based compensation as provided under Financial Accounting Standards Board Statement No. 123, or SFAS No. 123, Accounting for Stock-Based Compensation. Accordingly, we account for transactions in which goods and services are received in exchange for equity instruments based on the fair value of such goods and services received or the deemed fair value of the equity instruments issued, whichever is more reliably measured. The fair value is recorded as stock-based compensation expense ratably over the vesting period. When equity instruments are granted or sold in exchange for the receipt of goods or services and the value of those goods or services can not be readily estimated, as is true in connection with most stock options and warrants granted to employees, directors, consultants and other non-employees, we determine the fair value of the equity instruments using all relevant information, including application of the Black-Scholes option-pricing model and, in specified situations, input from valuation specialists, all of which require various estimates and assumptions. Different estimates and assumptions can yield materially different results. The factors which most affect charges or credits to operations related to stock-based compensation include: the deemed fair value of the common stock underlying the equity instruments for which stock-based compensation is recorded; the volatility of such deemed fair value; the estimated life of the equity instrument; and the assumed risk-free rate of return.

Because shares of our common stock have not been publicly traded, the fair value of our common stock for accounting purposes is determined by us. Factors that we consider when determining the fair value of our common stock include:

- pricing of private sales of our convertible preferred stock;
- prior valuations of stock grants and convertible preferred stock sales and the effect of events, including the progression of our product candidates, that have occurred between the time of the grants or sales;
- comparative rights and preferences of the security being granted compared to the rights and preferences of our other outstanding equity;
- comparative values of public companies discounted for the risk and limited liquidity provided for in the shares we are issuing;
- perspective provided by valuation specialists;
- any perspective provided by any investment banks, including the likelihood of an initial public offering and the potential value of the company in an initial public offering; and
- general economic trends.

If our estimates of the deemed fair value of these equity instruments or other judgments and assumptions are too high or too low, it would have the effect of overstating or understating expenses.

The fair value of our equity instruments, excluding preferred stock, granted prior to our consideration of a public offering of securities, has historically been determined by our board of directors based upon information available to it on the measurement dates. However, in 2005, we performed a retrospective analysis to determine the

deemed fair market value of our common stock for accounting purposes in light of the potential initial public offering. This retrospective analysis addressed the deemed

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fair market value of our common stock at key points in time in 2004 and 2005. We performed our analysis in accordance with several elements of a practice aid issued by the American Institute of Certified Public Accountants entitled Valuation of Privately Held Company Equity Securities Issued as Compensation. We used two primary valuation methodologies within the market approach in the practice aid, including a Guideline Public Company Analysis, or comparable company IPO analysis, and a Guideline Transactions Analysis, or comparable company M&A analysis, to determine the estimated deemed fair market value of our equity during the period discussed above. We then allocated value between the preferred stock and the common stock under each analysis and arrived at the value of the common stock based on a probability-weighted expected return methodology.

On December 16, 2004, the Financial Accounting Standards Board issued Statement No. 123 (revised in 2004), or SFAS No. 123R, Share-Based Payment which amends SFAS No. 123. The amendment is effective for us as of January 1, 2006. We are evaluating the impact of SFAS No. 123R on our operations.

Income Taxes. As part of the process of preparing our consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process involves estimating our actual current tax exposure together with assessing temporary differences resulting from differing treatments of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities. As of December 31, 2004, we had federal tax net operating loss carryforwards of $42.7 million, which expire starting in 2020, federal research and development credit carryforwards of $0.6 million and total net deferred tax assets of $24.9 million. We have recorded a valuation allowance of $24.9 million as an offset against these otherwise recognizable net deferred tax assets due to the uncertainty surrounding the timing of the realization of the tax benefit. In the event that we determine in the future that we will be able to realize all or a portion of our net deferred tax asset, an adjustment to the deferred tax valuation allowance would increase net income in the period in which such a determination is made. The Tax Reform Act of 1986 contains provisions that may limit the utilization of net operating loss carryforwards and credits available to be used in any given year in the event of a change in ownership.

Results of Operations

Nine Months Ended September 30, 2005 and 2004

Revenue

	Nine Months Ended September 30,		Change	
	2004	2005	$	%
	(dollars in thousands)			
Contract revenue	$ 2,891	$ 6,727	$ 3,836	133%
Product sales	185		(185)	(100)
Total revenue	$ 3,076	$ 6,727	$ 3,651	119%

Contract revenue for the nine months ended September 30, 2005 increased 133% to $6.7 million from $2.9 million in the corresponding period in 2004 due primarily to an increase in development activities relating to ALTU-135 and a reduction of our estimated development costs for ALTU-135 in the third quarter of 2005, resulting in a $3.3 million increase in our cumulative revenue. A significant portion of our contract revenue is generated from revenue recognized under the proportional performance method from collaboration agreements for ALTU-135 with CFFTI and Dr. Falk. We incurred research and development costs in each nine-month period to advance ALTU-135 and recognized additional revenue based on those costs.

Product sales decreased to $0.0 for the nine months ended September 30, 2005 from $0.2 million in the corresponding period in 2004 due to our decision to stop selling crystallized enzymes for use as catalysts in the

production of small molecule drugs during the first half of 2004.

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Cost of product sales

Cost of product sales for the nine months ended September 30, 2005 decreased to $0.0 from $0.1 million in 2004 as a result of no product sales.

Research and development expense

	Nine Months Ended September 30,		Change	
	2004	2005	$	%
	(dollars in thousands)			
ALTU-135	$ 7,871	$ 9,134	$ 1,263	16%
ALTU-238	1,775	5,865	4,090	230
Other research and development	2,349	4,793	2,444	104
Total research and development	$ 11,995	$ 19,792	$ 7,797	65%

Research and development expense for the nine months ended September 30, 2005 increased 65% to $19.8 million from $12.0 million in the corresponding period in 2004, due primarily to an increase in development costs relating to ALTU-135 and ALTU-238. During 2005, we completed a Phase II clinical trial for ALTU-135, and filed an IND, completed a Phase I clinical trial and started a Phase II clinical trial for ALTU-238. Product candidates in clinical development have greater associated development costs than those in the research or preclinical stage, and as a product candidate moves to later stage clinical trials, such as a Phase II clinical trial, the costs are higher due to the increased size and length of the clinical trial versus an earlier stage clinical trial. In addition, we had other preclinical product candidates advancing in our pipeline. To support the increased activities, our headcount in the research and development area increased to 66 full-time employees at September 30, 2005 from 50 full-time employees at September 30, 2004.

General, sales and administrative expense

General, sales and administrative expense for the nine months ended September 30, 2005 increased 30% to $6.0 million from $4.6 million in the corresponding period in 2004, due primarily to $0.3 million of increased recruiting fees, $0.3 million of increased consulting fees primarily related to consulting fees paid to a member of our Board of Directors and $0.4 million of increased salaries and professional fees related to our accounting, human resource and information technology functions. We expect that general and administrative expenses will increase in the future due to increased payroll, expanded infrastructure, increased consulting, legal, accounting and investor relations expenses associated with being a public company and costs incurred to seek collaborations with respect to any of our product candidates.

Interest income and interest expense

Interest income for the nine months ended September 30, 2005 increased 73% to $0.7 million from $0.4 million in the corresponding period in 2004, due to higher average investment balances from funds received in our Series C preferred stock financing in May 2004 and to higher average interest rates in 2005.

Interest expense for the nine months ended September 30, 2005 increased 76% to $0.6 million from $0.4 million in the corresponding period in 2004, due to an increase in our total debt from $2.7 million outstanding at September 30, 2004, to $6.6 million outstanding at September 30, 2005 as a result of our capital expenditures and higher interest rates on new borrowings in 2005.

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Other income (expense), net

Other income (expense), net represents foreign currency losses of $0.1 million in the nine months ended September 30, 2005 and foreign currency gains of $0.1 million compared to the corresponding period in 2004.

Preferred stock dividends and accretion

Preferred stock dividends and accretion for the nine months ended September 30, 2005 increased to $8.2 million from $5.5 million in the corresponding period in 2004, due to the issuance of the Series C preferred stock in May 2004. The Series C convertible preferred stock accrues dividends at a rate of 9% per year.

Year Ended December 31, 2004 Compared to Year Ended December 31, 2003

Revenue

	Years Ended December 31,		Change	
	2003	2004	$	%
	(dollars in thousands)			
Contract revenue	$ 2,613	$ 4,045	$ 1,432	55%
Product sales	1,268	185	(1,083)	(85)
Total revenue	$ 3,881	$ 4,230	$ 349	9%

Contract revenue for 2004 increased 55% to $4.0 million from $2.6 million in 2003 due primarily to increased revenue recognized under our collaborative agreements with CFFTI and Dr. Falk for the development of ALTU-135. We initiated a Phase II clinical trial of ALTU-135 in the second quarter of 2004. In 2003, we completed the Phase Ib clinical trial and conducted preparatory activities for the Phase II trial for ALTU-135.

A significant portion of our contract revenue is generated from revenue recognized under the proportional performance method, limited by milestone payments received, from collaboration agreements for ALTU-135 with CFFTI and Dr. Falk. In 2003, we increased the estimated development costs for ALTU-135. The increase in costs resulted in a $2.5 million reduction of our cumulative contract revenue at the end of 2003.

Product sales for 2004 decreased 85% to $0.2 million from $1.3 million in 2003 due to our decision to stop selling crystallized enzymes for use as catalysts in the production of small molecule drugs in the first quarter of 2004.

Cost of product sales

Cost of product sales for 2004 decreased 83% to $0.1 million from $0.6 million in 2003 due to lower product sales.

Research and development expense

	Years Ended December 31,		Change	
	2003	2004	$	%
	(dollars in thousands)			
ALTU-135	$ 9,440	$ 11,540	$ 2,100	22%
ALTU-238	1,376	3,604	2,228	162
Other research and development	2,466	3,951	1,485	60
Total research and development	$ 13,282	$ 19,095	$ 5,813	44%

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Research and development expense for 2004 increased 44% to $19.1 million from $13.3 million in 2003 due primarily to costs associated with the initiation of a Phase II clinical trial for ALTU-135 in the second quarter of 2004 and costs incurred in 2004 to prepare an IND filing for ALTU-238 in the first quarter of 2005. Other research and development expenses also increased in 2004 as we continued to advance other preclinical product candidates in our pipeline.

General, sales and administrative expense

General, sales and administrative expense for 2004 increased 14% to $6.3 million from $5.5 million in 2003 due primarily to $0.4 million of increased legal expenses, $0.2 million of increased accounting and board fees, and $0.1 million of recruiting expenses. The higher legal costs related to litigation which was settled during 2004. The increase in accounting and board fees was due primarily to our initiation of quarterly financial statement reviews by our auditors and an increase in the number of and fees paid to outside board members. Recruiting costs were higher due to a non-refundable fee paid to a search agency upon initiation of the search for a new President and CEO in the fourth quarter of 2004.

Interest income and interest expense

Interest income for 2004 increased 60% to $0.6 million from $0.4 million in 2003 due to higher average investment balances due to funds received from our Series C preferred stock financing in May 2004.

Interest expense for 2004 increased 87% to $0.5 million from $0.3 million in 2003. We increased our total debt from $2.9 million outstanding at December 31, 2003 to $5.7 million outstanding at December 31, 2004 in connection with increased capital expenditures.

Other income (expense), net

Other income (expense), net primarily represents foreign currency gains of $0.1 million in 2004 and $0.2 million in 2003.

Preferred stock dividends and accretion

Preferred stock dividends and accretion for 2004 increased 76% to $8.6 million from $4.9 million in 2003 due to the issuance of the Series C convertible preferred stock in May 2004.

Year Ended December 31, 2003 Compared to Year Ended December 31, 2002

Revenue

	Years Ended December 31,		Change	
	2002	2003	$	%
	(dollars in thousands)			
Contract revenue	$ 1,885	$ 2,613	$ 728	39%
Product sales	483	1,268	785	163
Total revenue	$ 2,368	$ 3,881	$ 1,513	64%

Contract revenue for 2003 increased 39% to $2.6 million from $1.9 million in 2002 due primarily to our entering into a collaboration agreement with Dr. Falk in December 2002 for the development and commercialization of ALTU-135 in Europe, the countries of the former Soviet Union, Israel and Egypt.

Product sales for 2003 increased 163% to $1.3 million from $0.5 million in 2002 due primarily to higher product sales to three customers in 2003 which represented 82% of all product sales during 2003. Sales to our largest customer were 49% of total product sales.

Cost of product sales

Cost of product sales for 2003 increased 140% to $0.6 million from $0.2 million in 2002 due to the increase in product sales in 2003.

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Research and development expense

	Years Ended December 31,		Change	
	2002	2003	$	%
	(dollars in thousands)			
ALTU-135	$ 10,091	$ 9,440	$ (651)	(6)%
Other research and development	3,083	3,842	759	25
Total research and development	$ 13,174	$ 13,282	$ 108	1%

Research and development costs for 2003 approximated those incurred in 2002 as lower ALTU-135 costs were offset by higher spending on other projects. ALTU-135 costs during 2003 consisted of Phase Ib clinical trial costs and preparatory activities related to a Phase II clinical trial. Costs incurred for ALTU-135 in 2002 related to filing an IND and conducting a Phase Ia clinical trial. In 2003, spending on ALTU-238 was approximately $1.4 million and is included in other research and development expenses in the table above. During 2002, we did not track costs of ALTU-238 separately from other research and development costs, as this product candidate was in research.

General, sales and administrative expense

General, sales and administrative expense for 2003 decreased 19% to $5.5 million from $6.9 million in 2002 primarily due to a $1.0 million reduction in legal fees and $0.4 million in reduced consulting and business development expenses. The legal fees decreased in 2003 due to the settlement of a trademark lawsuit filed by us in 2002. Lower advertising, market research, and website related costs accounted for the decrease in consulting and business development expenses.

Interest income and interest expense

Interest income for 2003 decreased 53% to $0.4 million from $0.9 million in 2002 due to lower average investment balances.

Interest expense for 2003 increased 61% to $0.3 million from $0.2 million in 2002. We increased our total debt to $2.9 million at December 31, 2003 from $2.3 million at December 31, 2002 in connection with increased capital expenditures.

Other income (expense), net

Other income (expense), net primarily represents foreign currency gains of $0.2 million in 2003 and a realized loss on investments of $0.1 million in 2002.

Preferred stock dividends and accretion

Preferred stock dividends and accretion were $4.9 million for both 2003 and 2002. We recognized a full year of dividends and accretion relating to our redeemable preferred stock and Series B convertible preferred stock during both years.

Liquidity and Capital Resources

Historically, we have financed our business primarily through the issuance of equity securities, revenues from collaborative agreements and product sales, debt financings and equipment loans and leases. At September 30, 2005, we had $7.2 million in cash and cash equivalents and $24.8 million in short-term investments available to finance future operations.

Prior to September 2001, we received most of our equity and debt financing proceeds from issuances of notes, common stock and preferred stock to Vertex, including redeemable preferred stock and Series A convertible preferred stock. The redeemable preferred stock is redeemable, at the option of Vertex, on or after December 31, 2010, or by us at our option at any time following the completion of this

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offering, at a price of $10.00 per share plus all accrued but unpaid dividends and is not convertible into common stock. Accrued but unpaid dividends on the redeemable preferred stock amounted to $1.5 million at September 30, 2005 and will be approximately $2.7 million on December 31, 2010.

In September and December 2001, we received net proceeds totaling approximately $46.2 million, net of issuance costs of approximately $4.6 million, from the private placement of our Series B convertible preferred stock and warrants. In May 2004, we received net proceeds of approximately $50.4 million, net of issuance costs of approximately $0.6 million, from the private placement of our Series C convertible preferred stock and warrants. Under the terms of the Series A, B and C convertible preferred stock, these shares are subject to mandatory conversion into common stock upon the closing of this offering. Accrued but unpaid dividends relating to the Series B and C convertible preferred stock are payable in the form of common stock upon the closing of this offering at the initial public offering price in this offering.

Our contract revenue is primarily derived from our research and development collaborations for ALTU-135 with CFFTI and Dr. Falk. As of September 30, 2005, we had received $15.9 million from CFFTI under our strategic alliance agreement. We received an additional $2.5 million in December 2005 as a result of the delivery to CFFTI of the data from our recently completed Phase II clinical trial of ALTU-135. In addition, we may receive an additional milestone payment of $6.6 million, less an amount determined by when we achieve the milestone.

As of September 30, 2005, we had received 7.0 million, which equated to $8.1 million based on the exchange rates in effect at the time we received the milestone payments, under our development, commercialization and marketing agreement with Dr. Falk. We received an additional 4.0 million in December 2005, which equated to $4.7 million based on the exchange rate in effect at the time, as a result of the delivery to Dr. Falk of the final report from our recently completed Phase II clinical trial of ALTU-135. In addition, Dr. Falk has agreed to pay a portion of the development expenses we incur in connection with the conduct of an international Phase III clinical trial, including costs relating to the process of obtaining regulatory approval, project management costs, statistical design and studies, and preparation of reports.

As of September 30, 2005, we are entitled to receive up to $32.1 million of future milestone payments under these two collaborations if all development milestones are met. We have no other external sources of funding.

Since our inception, we have generated significant losses while we have advanced our product candidates into preclinical and clinical trials. Accordingly, we have historically used cash in our operating activities. During the nine months ended September 30, 2005, we used approximately $19.9 million in cash to fund our operating activities, and in 2004 we used approximately $18.2 million to fund these activities. As we continue to advance our product candidates through development and begin to incur increased sales and marketing costs related to commercialization of our product candidates, we expect to incur additional operating losses until such time, if any, as our efforts result in commercially viable drug products. We do not expect our existing capital resources, together with the net proceeds from this offering and the milestone payments and research and development funding we expect to receive, to be sufficient to fund the completion of the development of any of our product candidates, and we expect that we will need to raise additional funds prior to being able to market any products.

Our capital expenditures of $5.0 million in 2004, which were partially financed through equipment loans, significantly exceeded prior years as Amano constructed a facility to produce ALTU-135 for the Phase III clinical trial and toxicology studies and we agreed to purchase production equipment which is located at the Amano facility. Capital expenditures for the nine months ended September 30, 2005 of $1.9 million were primarily related to equipment in support of our research and development activities and to leasehold improvements for our facilities. We expect capital expenditures in 2005 and 2006 to be approximately $3.0 million per year. However, our capital expenditures may increase depending upon the equipment requirements of any additional contract manufacturers with whom we work and our needs for additional facilities.

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We have generally financed a substantial portion of our capital expenditures through equipment loans and leases under which the lender retains a security interest in the equipment. Our ability to borrow under our existing capital equipment and lease credit facilities expired on June 30, 2005. The capital equipment facility is governed by a security agreement that contains the key terms of the loans. The facility provided us with the ability to borrow at different points in time based upon our purchase of equipment. Each borrowing carries a fixed rate of interest which was established at the time of borrowing and is payable in fixed monthly installments over a four year period. Under the terms of the capital equipment lease, we lease equipment purchased under the agreement. Each lease has a four year term with fixed monthly payments. At the end of the lease term, we will have the option to purchase the equipment from the lessor. Both facilities require us to maintain insurance on the collateral. We intend to secure additional equipment loan facilities to continue to finance a substantial portion of our future capital expenditures under equipment financing arrangements. We do not engage in off-balance sheet financing arrangements.

The following table summarizes our contractual obligations at September 30, 2005 and the effects such obligations are expected to have on our liquidity and cash flows in future periods:

Payments Due by Period

	Total	October 2005 Through December 2005	2006 Through 2007	2008 Through 2009	After 2009
			(in thousands)		
Contractual Obligations(1):					
Short and long-term debt(2)	$ 7,307	$ 717	$ 4,575	$ 2,015	$
Capital lease obligations(2)	320	66	254		
Operating lease obligations	2,143	389	1,354	400	
Purchase obligations(3)					
Total contractual cash obligations	$ 9,770	$ 1,172	$ 6,183	$ 2,415	$

(1) Excludes estimated payment of $7.2 million to Vertex in connection with its optional redemption of shares of our redeemable preferred stock on or after December 31, 2010, plus dividends accruing after that date, and amounts payable to CFFTI upon FDA approval of ALTU-135 and royalties to CFFTI on product sales of ALTU-135.

(2) Includes interest expense.

(3) On October 28, 2005 and on December 15, 2005, we entered into non-cancelable purchase orders for a total of 2.5 million, all of which is due in 2006.

Based on our operating plans, we estimate that our net cash used in operating activities will be between $55 million and $65 million in 2006. We believe that the proceeds from this offering, together with our existing cash resources, investment securities and funding we expect to receive under our collaborations, will be sufficient to finance our planned operations, including increases in spending for our ALTU-135 and ALTU-238 clinical programs and for our preclinical product candidates through the first half of 2007. However, over the next several years, we may require significant additional funds to conduct clinical and non-clinical trials, achieve regulatory approvals and, subject to such approvals, commercially launch ALTU-135 and ALTU-238. Our future capital requirements will depend on many factors, including the scope and progress made in our research and development activities and our

clinical trials. We may also need additional funds for possible future strategic acquisitions of businesses, products or technologies complementary to our business. If additional funds are required, we may raise such funds from time to time through public or private sales of equity or from borrowings. Financing may not be available on acceptable terms, or at all, and our failure to raise capital when needed could materially adversely impact our growth plans and our financial condition and results of operations. Additional equity financing may be

dilutive to the holders of our common stock and debt financing, if available, may involve significant cash payment obligations and covenants that restrict our ability to operate our business.

Quantitative and Qualitative Disclosures About Market Risks

Our cash, cash equivalents and short-term investments are invested with highly-rated financial institutions in North America with the primary objective of preservation of principal and minimum risk. When purchased, the investments generally have a maturity of less than 12 months. Some of the securities we invest in are subject to interest rate risk and will fall in value if market interest rates increase. To minimize the risk associated with changing interest rates, we invest primarily in bank certificates of deposit, United States government securities and investment-grade commercial paper and corporate notes that can be held to their maturity date. Substantially all of our investments at September 30, 2005 met these criteria. We had gross unrealized losses of $0.1 million on our investments at September 30, 2005. If market interest rates were to increase immediately and uniformly by 10% from levels at September 30, 2005, we estimate that the fair value of our investment portfolio would decline by an immaterial amount.

Our total debt at September 30, 2005 was $6.6 million, primarily representing drawdowns under our capital equipment and lease credit facilities. All borrowings under these credit facilities carried fixed rates of interest established at the time such drawdowns were made. Accordingly, once drawdowns were made, our future interest costs are not subject to fluctuations in market interest rates.

Our assets are principally located in the United States and substantially all of our historical revenues and operating expenses are denominated in United States dollars. Contract revenue under our collaboration with Dr. Falk and some purchases of raw materials are denominated in Euros. Accordingly, we are subject to market risk with respect to foreign currency-denominated revenues and expenses. We had foreign currency exchange losses of $0.1 million in the nine months ended September 30, 2005 and foreign currency exchange gains of $0.1 million in 2004. If the average Euro/ United States dollar exchange rate were to strengthen or weaken by 10% against the average respective exchange rates experienced in the nine months ended September 30, 2005 or 2004, we estimate that the impact on our financial position, results of operations and cash flows would not be material. Since ALTU-135 has not reached commercialization in North America or in the territory covered by the Dr. Falk agreement, we do not believe we are subject to significant foreign currency risk at this time. We may engage in additional collaborations with international partners. When ALTU-135 or any other future drug candidates reach commercialization outside of the United States, if at all, or we enter into additional collaborations with international partners providing for foreign currency-denominated revenues and expenses, we may be subject to significant market risk.

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BUSINESS

Overview

We are a biopharmaceutical company focused on the development and commercialization of oral and injectable protein therapeutics for chronic gastrointestinal and metabolic disorders, with two product candidates in clinical development. We are using our proprietary protein crystallization technology to develop protein therapies which we believe will have significant advantages over existing products or will address unmet medical needs. Our product candidates are designed to either increase the amount of a protein that is in short supply in the body or degrade and remove toxic metabolites from the blood stream. We have successfully completed a Phase II clinical trial of ALTU-135 for the treatment of malabsorption due to exocrine pancreatic insufficiency, and we are currently conducting a Phase II clinical trial of ALTU-238 in adults for the treatment of growth hormone deficiency. We also have a pipeline of other product candidates in preclinical research and development.

Our lead product candidate, ALTU-135, is an orally-administered enzyme replacement therapy for the treatment of malabsorption due to exocrine pancreatic insufficiency. Exocrine pancreatic insufficiency is a deficiency of digestive enzymes normally produced by the pancreas which leads to malnutrition, impaired growth and shortened life expectancy. Exocrine pancreatic insufficiency can result from a number of diseases and conditions, including cystic fibrosis, chronic pancreatitis and pancreatic cancer. According to IMS Health, global prescription sales of existing pancreatic enzyme replacement products were $658 million in 2004.

We believe that ALTU-135, if approved, will have significant competitive advantages compared to existing pancreatic enzyme replacement therapies. We believe these potential advantages include:

- benefits associated with a drug that is microbially-derived, rather than a drug derived from pig pancreases, and manufactured in a controlled environment;
- a significantly lower pill burden, allowing patients to take, on average, one capsule per meal or snack compared to, on average, four or five larger capsules per meal or snack with existing products;
- more consistent and reliable dosing;
- resistance to degradation early in the gastrointestinal tract, permitting enzyme activity where most digestion and absorption of fats, proteins and carbohydrates occurs;
- the potential for a liquid formulation, which is currently unavailable, for children and adults who are unable to swallow capsules; and
- testing in what we believe is the largest well-controlled, scientifically-rigorous prospective clinical trial conducted to date in the treatment of cystic fibrosis patients with pancreatic insufficiency.

We believe that many of these advantages are a result of our proprietary protein crystalization technology, which enables improved product consistency and stability, as well as higher concentration and purity.

Existing pancreatic enzyme replacement products have been marketed since before enactment of the FDCA in 1938 and are not marketed under NDAs approved by the FDA. In April 2004, the FDA issued a notice that manufacturers of existing pancreatic enzyme replacement products will be subject to regulatory action if they do not obtain approved NDAs for those products by April 28, 2008. We believe that some of the manufacturers of these products may not be able to satisfy the FDA s requirements for NDAs for these products.

In our recently completed prospective, randomized, double-blind, dose-ranging Phase II clinical trial of the solid form of ALTU-135, the product candidate was well tolerated and showed a statistically significant improvement in fat absorption (p-value<0.001), the trial s primary endpoint, in the two high dose treatment arms. P-values are an indication of statistical significance reflecting the probability of an observation occurring due to chance alone. A p-value<0.001 means that the probability of the event measured occurring by chance is less than 1 in 1,000. In the two high dose treatment arms, we also observed a statistically significant improvement in protein absorption

(p-value<0.001) and a statistically

significant decrease in stool weight (p-value<0.001), each of which was a secondary endpoint in the study. In addition, we observed a positive trend, although not statistically significant, in carbohydrate absorption. However, the results of our Phase II clinical trial may not be predictive of the results in our Phase III clinical trial of ALTU-135. We expect to initiate a pivotal Phase III clinical trial of the solid form of ALTU-135 in patients with cystic fibrosis and a long-term safety study in cystic fibrosis patients and other patients with pancreatic insufficiency in the second half of 2006. The FDA and the EMEA have granted ALTU-135 orphan drug designation, which generally provides a drug being developed for a rare disease or condition with marketing exclusivity for seven years in the United States and 10 years in the European Union if it is the first drug of its type approved for such indication. Additionally, the FDA has granted ALTU-135 fast track designation and admission into its CMA Pilot 2 Program, both of which are designed to facilitate interactions between a drug developer and the FDA during the drug development process.

Our next most advanced product candidate, ALTU-238, is a crystallized formulation of hGH that is designed to be injected once-weekly with a fine gauge needle for the treatment of growth hormone deficiency and hGH-related disorders. Based on reported revenues of existing products, global sales of hGH products exceeded $2.2 billion in 2004, and the market grew at a compound annual growth rate of approximately 15% from 2002 to 2004. We are developing ALTU-238 for both adult and pediatric populations as an alternative to current therapies. Current medical guidelines for clinical practice generally recommend daily administration of existing therapies by subcutaneous injection. In our Phase I clinical trial of ALTU-238, which we completed in May 2005, ALTU-238 demonstrated pharmacokinetic and pharmacodynamic parameters that are consistent with once-weekly administration. We believe that the convenience of once-weekly administration of ALTU-238, if approved, would improve patient acceptance and compliance, and thereby effectiveness. We recently initiated a Phase II clinical trial for ALTU-238 in adults with growth hormone deficiency and expect to have data from this trial in the first half of 2006.

We also have a pipeline of product candidates in preclinical research and development that we are designing to address other areas of unmet need in chronic gastrointestinal and metabolic disorders. Our most advanced preclinical product candidates are ALTU-237, designed to treat hyperoxalurias, and ALTU-236, designed to treat phenylketonuria. We believe that these product candidates, if approved, will provide treatments for these disorders, both of which lack any approved pharmaceutical therapies. We expect to file an IND for ALTU-237 for the treatment of hyperoxalurias in early 2007.

Our product candidates are based on our proprietary technology, which enables the large-scale crystallization of proteins for use as therapeutic drugs. We apply our technology to improve known protein drugs, as well as to develop other proteins into protein therapeutics. For example, our product candidate ALTU-135 is based on known enzymes to which we apply our proprietary crystallization technology with the goal of offering a new and improved drug. We have developed our product candidate ALTU-238 by applying our proprietary crystallization technology with the goal of offering an improved version of an approved drug. We believe that, by using our technology, we are able to overcome many of the limitations of existing protein therapies and deliver proteins in solid and liquid oral form, as well as in extended-release injectable formulations. Our product candidates are designed to offer improvements over existing products, such as greater convenience, better safety and efficacy and longer shelf life. In addition, we believe that we may be able to reduce the development risk and time to market for our drug candidates because we apply our technology to existing, well-understood proteins with well-defined mechanisms of action. We believe that our technology is broadly applicable to different classes of proteins, including enzymes, hormones, antibodies, cytokines and peptides. To date, we have crystallized more than 70 proteins for use in our research and development programs.

We currently hold worldwide rights to all of our product candidates, except for rights we have licensed to Dr. Falk to commercialize ALTU-135 in Europe, the countries of the former Soviet Union, Israel and Egypt. We have also entered into a strategic alliance agreement with CFFTI, which is funding a portion of the development of ALTU-135. We intend to establish a commercial infrastructure and a targeted specialty sales force to market our products in North America.

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Our Strategy

Our goal is to become a leading biopharmaceutical company focused on developing and commercializing protein therapies to address unmet medical needs in chronic gastrointestinal and metabolic disorders. Our strategy to achieve this objective includes the following elements:

Focus on advancing our lead product candidates. We have two product candidates in clinical trials. We are preparing ALTU-135 for a pivotal Phase III clinical trial for the treatment of malabsorption due to exocrine pancreatic insufficiency. In addition, we recently initiated a Phase II clinical trial of ALTU-238 in adult growth hormone deficient patients. If this trial is successful, we plan to initiate a Phase III clinical trial in adults and plan to initiate a Phase II/III clinical trial in pediatric patients, which we plan to request that the FDA consider to be a pivotal trial. However, the FDA may not agree with our proposed combined Phase II/III clinical trial in pediatric patients and may require additional studies in children. We believe that these product candidates, if approved, will offer significant advantages over existing therapies. In addition, because these product candidates are based on well-understood proteins with known mechanisms of action, we believe we may be able to reduce their development risk and time to market. Our primary focus is on aggressively advancing the clinical development of these two product candidates to NDA submission.

Continue to build and advance our product pipeline for gastrointestinal and metabolic disorders. In addition to our product candidates in clinical development, we have built a pipeline of preclinical product candidates based on our proprietary protein crystallization technology. These product candidates are designed to address unmet needs for the treatment of hyperoxalurias, phenylketonuria, and other chronic gastrointestinal and metabolic diseases. We plan to apply the manufacturing, clinical and regulatory experience gained from our two lead product candidates to advance a number of these preclinical product candidates into clinical trials over the next few years. We also plan to add additional product candidates to our pipeline through the application of our proprietary protein crystallization technology to existing protein therapeutics or known proteins with potential therapeutic use.

Establish a commercial infrastructure. We plan to establish a commercial infrastructure and targeted specialty sales force to market our two lead product candidates in North America. In addition, we plan to leverage our sales and marketing capabilities by targeting the same groups of physician specialists with additional products that we bring to market either through our own development efforts or by in-licensing from others.

Selectively establish collaborations for our product candidates with leading pharmaceutical and biotechnology companies. We currently have a collaboration with Dr. Falk for the commercialization of ALTU-135 in Europe, the countries of the former Soviet Union, Israel and Egypt. We intend to develop additional collaborations in markets outside of North America where we believe that having a collaborator will enable us to gain better access to those markets. We may also collaborate with other companies to accelerate the development of some of our early-stage product candidates, or to co-promote our product candidates in North America in instances where we believe that a larger sales and marketing presence will expand the market or accelerate penetration.

Establish additional collaborations to apply our technology to other therapeutic proteins. We believe that our technology has broad applicability to many classes of proteins and can be used to enhance protein therapeutics developed by other parties. We intend to derive value from our technology by selectively collaborating with biotechnology and pharmaceutical companies that will use our technology for products that they are either currently marketing or developing.

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Our Product Candidates

The following table summarizes key information about our product candidates that are in clinical trials and our most advanced preclinical research and development programs. All of the product candidates are based on our crystallization technology and are the result of our internal research and development efforts.

Product Candidate (Delivery) *Indication*	Stage of Development	Commercial Rights	Status
ALTU-135 (oral) *Exocrine Pancreatic Insufficiency*	Phase II completed	Dr. Falk (Europe, the countries of the former Soviet Union, Israel and Egypt) Altus (United States and rest of world)	Phase III clinical trial and long-term safety study of the solid form expected to begin in the second half of 2006; Phase II clinical trial of the liquid form expected to begin in early 2007
ALTU-238 (injectable) *Growth Disorders*	Phase II	Altus	Data from Phase II clinical trial in adults expected in the first half of 2006; Phase III clinical trial in adults and Phase II/III clinical trial in children expected to begin in the second half of 2006
ALTU-237 (oral) *Hyperoxalurias*	Preclinical	Altus	IND enabling work in progress, with IND filing expected in early 2007
ALTU-236 (oral) *Phenylketonuria*	Preclinical	Altus	Preclinical testing in animal models

We may be required to perform additional studies in order to obtain marketing approval for ALTU-135 and ALTU-238 even if the clinical trials we currently expect to conduct are successful. In addition, if the FDA does not agree with our proposed combined Phase II/III clinical trial of ALTU-238 in children, we may be required to conduct additional studies in children.

We are developing our product candidates with the goal of initially seeking marketing approvals in the United States and the European Union. We have not yet sought regulatory approval for any product candidate in the European Union or any country outside the United States. For ALTU-135, we and Dr. Falk have agreed with the EMEA on our pre-clinical plan and are awaiting a response from the EMEA for our clinical plan. For ALTU-238, we plan to submit an initial request for guidance on regulatory matters from European regulatory authorities during the second half of 2006. We expect that the data from the studies we have conducted or plan to conduct pursuant to the INDs we have filed with the FDA will form a substantial part of the applications for marketing approval to be filed with the EMEA and regulatory authorities in other parts of the world. However, we may be required to perform additional clinical trials to receive marketing approval outside the United States.

ALTU-135 for Exocrine Pancreatic Insufficiency

Our lead product candidate, ALTU-135, is an orally-administered enzyme replacement therapy for which we have successfully completed a Phase II clinical trial of its solid form for the treatment of malabsorption due to exocrine pancreatic insufficiency. Pancreatic insufficiency is a deficiency of the digestive enzymes normally produced by the pancreas and can result from a number of disease conditions. Conditions resulting in exocrine pancreatic insufficiency include cystic fibrosis, chronic pancreatitis and pancreatic cancer. Patients with exocrine pancreatic

insufficiency are currently treated with enzyme replacement products containing enzymes derived from pig pancreases. We believe that ALTU-135 represents a significant potential advancement as a therapeutic alternative for the treatment of these patients.

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ALTU-135 contains three types of digestive enzymes derived from non-animal sources:

Lipase. We selected the lipase in ALTU-135, which is used for the digestion of fats, because it demonstrated the ability in *in vitro* and animal testing to be active across a wide range of acidity levels and more resistant to degradation in the harsh environment of the gastrointestinal tract when compared to other lipases. It also demonstrated the ability to break down a broader range of fats than existing animal-derived lipases. Because lipases are the most susceptible of the three enzymes to degradation in the gastrointestinal tract, we use our proprietary technology to both crystallize and cross-link the lipase for increased activity and stability;

Protease. We selected the protease in ALTU-135, which is used for the digestion of proteins, because it demonstrated the ability in *in vitro* and animal testing to break down as many types of proteins as the multiple proteases contained in existing products. We crystallize the protease for greater stability and concentration;

Amylase. We selected the amylase in ALTU-135, which is used for the digestion of carbohydrates, because it demonstrated the ability in *in vitro* testing to be active in the highly acidic environment of the upper gastrointestinal tract. Because the amylase is stable in soluble form, we do not crystallize it.

Our contract manufacturer produces these enzymes from microbial sources using separate fermentation and purification processes. The enzymes are then blended to achieve a specified and consistent ratio of lipase to protease to amylase in each capsule.

Disease Background and Market Opportunity

We have designed ALTU-135 to treat malabsorption resulting from exocrine pancreatic insufficiency. Malabsorption is the failure to absorb adequate amounts of nutrients, such as fats, proteins and carbohydrates, in food and is clinically manifested as malnutrition, weight loss or poor weight gain, impaired growth, abdominal bloating, cramping and chronic diarrhea. Exocrine pancreatic insufficiency is a deficiency of digestive enzymes normally produced by the pancreas that results in poor absorption of essential nutrients from food. If not treated appropriately, exocrine pancreatic insufficiency generally leads to malnutrition, impaired growth and shortened life expectancy.

According to IMS Health, the worldwide market for pancreatic enzyme replacement therapies grew at a compound annual growth rate of approximately 7% from $579 million in 2002 to $658 million in 2004. The market for these products in 2004 was approximately $190 million in North America, $228 million in Europe and $241 million in the rest of the world according to IMS Health. Diseases and conditions with a prevalence of exocrine pancreatic insufficiency include:

Cystic fibrosis Cystic fibrosis is one of the most prevalent genetic disorders in the Caucasian population, according to the Medical Genetics Institute of Cedars-Sinai. According to the Cystic Fibrosis Foundation, this disease affects approximately 30,000 people in the United States. Approximately 90% of cystic fibrosis patients are prescribed pancreatic enzymes to treat exocrine pancreatic insufficiency. Cystic fibrosis patients with exocrine pancreatic insufficiency have a median life expectancy of 31 years, compared to 50 years for those cystic fibrosis patients who have sufficient pancreatic enzymes.

Chronic pancreatitis In many patients, chronic pancreatitis is clinically silent and many patients with unexplained abdominal pain may have chronic pancreatitis that eludes diagnosis. Therefore, according to The New England Journal of Medicine, the true prevalence of the disease is not known, although estimates range from 0.04% to 5%. Based on survey data reported in Medscape General Medicine, we believe chronic pancreatitis results in more than 500,000 physician visits per year in the United States.

Pancreatic cancer The American Cancer Society estimates that approximately 30,000 people in the United States are diagnosed with pancreatic cancer each year.

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According to an industry estimate, approximately 65% of patients with pancreatic cancer will have some degree of fat malabsorption.

HIV/AIDS According to the U.S. Centers for Disease Control and Prevention, there were approximately 1.1 million people with HIV/AIDS in the United States in 2003. Approximately 50% of HIV-positive patients in an industry study had evidence of pancreatic insufficiency.

Limitations of Existing Products

Patients with exocrine pancreatic insufficiency are typically prescribed enzyme replacement products containing enzymes extracted from pig pancreases. Many of these products were available for human use prior to the passage of the FDCA in 1938, and all are currently marketed without NDAs approved by the FDA. In 1995, the FDA issued a final rule requiring that these pancreatic enzyme products be marketed by prescription only, and in April 2004, the FDA issued a notice that manufacturers of these products will be subject to regulatory action if they do not obtain approved NDAs for these products by April 28, 2008. At the same time, the FDA also issued draft guidance, known as the PEP Guidance, that existing manufacturers of pancreatic enzyme products can follow in order to obtain FDA approval.

Existing pancreatic enzyme replacement therapies are supposed to be taken with every meal and snack in order to permit the digestion and absorption by the patient of sufficient amounts of fats, proteins and carbohydrates. We believe that these products have a number of significant limitations that affect their ease of administration, safety and effectiveness, including:

High pill burden. Patients on existing pancreatic enzyme therapies are generally required to take, on average, four or five larger capsules per meal or snack, resulting in poor compliance and therefore reduced long-term efficacy, due to the following factors:

Degradation of enzymes in the gastrointestinal tract. A significant portion of the enzymes in existing products are degraded in the gastrointestinal tract prior to exerting their therapeutic effect. As a result, many patients are required to take many capsules to achieve a desired level of absorption of fats, proteins and carbohydrates. Some manufacturers have tried to address this issue by adding a protective coating to the enzymes, but this often results in a failure of the enzyme to dissolve and become active early enough in the gastrointestinal tract to break down foods and effectively assist with the digestive process.

Low concentration. Existing therapies are comprised of a mixture of enzymes and other materials found in a pig s pancreas. Based on comments submitted in response to the FDA s PEP Guidance in 2004 by manufacturers of existing products and the components of such products, we believe that manufacturers of these products are unable to concentrate the enzymes in the mixture to reduce the amount of material a patient must consume.

Variability of therapeutic effect. Because existing products are extracted from pig pancreases, there is significant variability between different manufacturing batches. As a result, we believe that the therapeutic effect of these therapies is also significantly variable. Each time a patient refills a prescription the patient may need to experiment with the number of pills taken per meal or snack to achieve effective digestion of food intake.

Short shelf life. Existing enzyme therapies tend to lose activity quickly relative to other types of drugs. Many manufacturers try to overcome this limitation by filling each capsule with more drug than specified in order to achieve the stated label claim over time, which leads to inconsistent efficacy and raises safety concerns. We believe this also contributes to patient uncertainty about the number of capsules to take per meal or snack.

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Product impurities. Existing enzyme therapies are poorly characterized and may contain impurities, including porcine viruses, tissue components and other contaminants. Impurities may increase the risk of antigenicity.

Anticipated Advantages of ALTU-135

We believe that ALTU-135, if approved, will offer patients a more convenient and effective long-term therapy for the treatment of malabsorption due to exocrine pancreatic insufficiency because of the following features:

Reduced pill burden. ALTU-135 is a highly concentrated, pure and stable enzyme replacement therapy designed to be as effective as existing products with significantly fewer capsules. Based on the clinical trials we have conducted to date, we believe that most patients will be effectively treated with, on average, one capsule per meal or snack. We believe that this dosing will result in greater convenience for the patient, which will improve compliance and, therefore, long-term effectiveness of therapy. We believe that ALTU-135 will reduce the pill burden for patients due to the following factors:

Stability of enzymes in the gastrointestinal tract. We have designed ALTU-135 to withstand degradation, maintain its activity across the different pH levels in the gastrointestinal tract, and exert its therapeutic effect in the first part of the small intestine, or the duodenum, where most fats, proteins and carbohydrates are broken down and absorbed. We believe this design will provide a more effective treatment for patients than current pancreatic enzyme replacement products, which are often degraded earlier in the gastrointestinal tract.

High concentration. Two of the three enzymes in ALTU-135 are crystallized, resulting in a highly concentrated product that requires less material to achieve a desired therapeutic effect.

Consistent activity. We have designed ALTU-135 to exhibit consistent enzyme activity from batch to batch. The enzymes in ALTU-135 are microbially derived and produced through fermentation. The amount of material and related enzyme activity in a capsule of ALTU-135 is tightly controlled, as each of the three enzymes in ALTU-135 is individually manufactured and added to the final drug product in a specific amount. We believe this will result in consistent product performance, eliminating the need for dose experimentation each time a patient refills a prescription.

Longer shelf life. Based on stability studies performed as part of our development program, we believe that ALTU-135 capsules are significantly more stable than existing porcine-derived products, which we expect will lead to a longer effective shelf life.

Potential liquid formulation. We have completed *in vivo* studies of a liquid formulation of ALTU-135. We believe that a liquid formulation will significantly benefit children and adults who are unable to swallow capsules.

ALTU-135 Development Activities and Strategy

We have successfully completed a Phase II clinical trial for the solid form of ALTU-135 and are preparing to advance this product candidate into a pivotal Phase III clinical trial in patients with cystic fibrosis and a long-term safety study in cystic fibrosis patients and other patients with pancreatic insufficiency in the second half of 2006. The FDA and the EMEA have granted ALTU-135 orphan drug designation for malabsorption due to exocrine pancreatic insufficiency, and the FDA has also granted ALTU-135 fast track designation. Fast track designation is designed to facilitate the development of new drugs and may be granted to a product with a specific indication where the FDA agrees that the product is intended to treat a serious or life threatening condition and demonstrates the potential to address unmet medical needs for that condition. Fast track designation also permits drug developers to submit sections of an NDA as they become available. In February 2004, ALTU-135 was also admitted to the FDA s CMA Pilot 2 Program. Under the CMA Pilot 2

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program, one fast track designated product from each review division of the Center for Drug Evaluation and Research, or CDER, the center at the FDA that regulates drugs and therapeutic biologics, and the Center for Biologics Evaluation and Research, or CBER, the center at the FDA that regulates other biologics, is selected for frequent scientific feedback and interactions with the FDA, with a goal of improving the efficiency and effectiveness of the drug development process. We plan to begin submitting sections of our NDA for ALTU-135 to the FDA in the first half of 2007 and additional sections thereafter, including data from our Phase III clinical trial and long-term safety-study, pursuant to a timetable to be agreed upon by the FDA and us.

We have completed four clinical trials of ALTU-135, three of which were in cystic fibrosis patients and one of which was in healthy volunteers. The following table summarizes the clinical trials we have completed to date:

Trial	Number of Subjects	Primary Study Objective
Phase Ia	20 healthy volunteers	Safety and tolerability over 7 days of dosing
Phase Ib	23 cystic fibrosis patients	Safety, tolerability and clinical activity over 3 days of dosing
Phase Ic	8 cystic fibrosis patients	Safety, tolerability and clinical activity over 14 days of dosing
Phase II	129 cystic fibrosis patients	Safety, tolerability and efficacy over 28 days of dosing

Our clinical trials with cystic fibrosis patients assessed a number of different measures, or endpoints, of digestion and absorption. We assessed fat absorption by measuring a patient s fat intake over a specified period of time and comparing that to the amount of fat in their stool during the same period. This comparison enabled us to calculate the amount of fat a patient absorbed, using a metric known as the coefficient of fat absorption, or CFA. The same process was applied to determine protein absorption, using a metric called the coefficient of nitrogen absorption, or CNA. We measured carbohydrate absorption by analyzing a patient s blood glucose levels after a starch meal, using a test we refer to as the starch challenge test. In our Phase Ib and Phase II clinical trials, we also measured the number and weight of the patients stools.

Phase I Clinical Trials

In our three Phase I clinical trials, the solid form of ALTU-135 was generally well tolerated at doses of up to four times the recommended clinical dose. In addition, in our Phase Ib trial, we observed statistically significant evidence of clinical activity based on CFA, CNA and stool results when all cohorts in the Phase Ib were considered together. In the Phase Ic trial, we observed evidence of amylase activity based on a treatment-associated increase in maximum glucose levels in a small number of subjects.

Phase II Clinical Trial

We successfully completed our Phase II clinical trial for ALTU-135 and presented the results of the trial at the North American Cystic Fibrosis Conference in October 2005. In the trial, ALTU-135 was well tolerated and showed a statistically significant improvement in fat absorption (p-value<0.001), the trial s primary endpoint, in the two high dose treatment arms. In these treatment arms, we also observed a statistically significant improvement in protein absorption (p-value<0.001) and a statistically significant decrease in stool weight (p-value<0.001), each of which was a secondary endpoint in the study. In addition, we observed a positive trend, although not statistically significant, in carbohydrate absorption in these treatment arms.

We believe that this is the first clinical trial to demonstrate that the combination of the three enzymes in ALTU-135, lipase, protease and amylase, may be effective in treating pancreatic insufficiency. We also believe that this trial is the only trial to concurrently evaluate the impact of a fixed dose of

enzyme replacement therapy on the absorption of fats, proteins and carbohydrates. Based on the results from our Phase II clinical trial and earlier trials for ALTU-135, we believe:

a formulation of ALTU-135 consisting of 25,000 units of lipase, 25,000 units of protease and 3,750 units of amylase, representing a ratio of 1:1:0.15, is the minimal dose combination that provides a clinically meaningful improvement in fat and protein absorption;

most patients will be able to be treated with one small capsule of ALTU-135 per meal or snack; and

patients with the most severe fat and protein malabsorption will realize the greatest benefit from treatment with ALTU-135.

Study Design and Demographics

The purpose of our Phase II clinical trial of ALTU-135 was to obtain initial efficacy data, select a dose level of ALTU-135 for further evaluation in our Phase III clinical trial and assess the safety and tolerability of ALTU-135 over a 28-day treatment period in cystic fibrosis patients with pancreatic insufficiency. We believe our Phase II clinical trial of ALTU-135 represents the largest prospective, randomized, double-blind, dose-ranging trial conducted to date in the treatment of cystic fibrosis patients with pancreatic insufficiency.

To establish a baseline period measurement of fat, protein and carbohydrate absorption, at the beginning of the trial patients were tested during a 72-hour period when they were not taking enzyme replacement therapy. Following this baseline period, ALTU-135 in capsule form was orally administered to patients with each of five meals or snacks per day for a period of 28 days. In the middle of the trial, we performed an additional measurement of fat, protein and carbohydrate absorption to establish these measurements for the treatment period. For both the baseline and treatment period measurements, we assessed fat and protein absorption following a 72-hour, controlled, high-fat diet by examining stools collected from patients. The appropriate period for measuring fat and protein absorption was determined by using a blue dye stool marker, which facilitated accurate and complete stool collection. Changes in carbohydrate absorption were determined by measuring blood glucose responses using the starch challenge test. We assessed the clinical activity of the lipase component of ALTU-135 by measuring the change in CFA, the clinical activity of the protease component of ALTU-135 by measuring the change in CNA and the clinical activity of the amylase component of ALTU-135 by measuring the change in carbohydrate absorption.

The Phase II clinical trial for ALTU-135 enrolled a total of 129 subjects with cystic fibrosis and pancreatic insufficiency in 26 cystic fibrosis centers in the United States. The demographics and baseline characteristics of the patients in the trial generally reflect the cystic fibrosis patient population. Ninety-five percent of the patients in the trial were Caucasian. The trial consisted of patients between the ages of 11 and 55, with a median age of 21.

The study included three treatment arms of approximately equal size, with patients in each arm receiving a fixed dose of ALTU-135 in capsule form administered orally:

Treatment arm 1 5,000 units lipase: 5,000 units protease: 750 units amylase per meal or snack;

Treatment arm 2 25,000 units lipase: 25,000 units protease: 3,750 units amylase per meal or snack, which is the dose we have selected to use in our planned Phase III clinical trials; and

Treatment arm 3 100,000 units lipase: 100,000 units protease: 15,000 units amylase per meal or snack.

The trial did not include a placebo arm, as we assessed efficacy based on the differences in fat, protein and carbohydrate absorption between the baseline period and the treatment period.

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Efficacy Results

Of the 129 patients who were enrolled in the trial, 117 patients had valid stool collections during the ALTU-135 treatment period. We used this subset of patients for our main efficacy analyses. The results of the Phase II clinical trial showed a statistically significant improvement in CFA from the baseline period to the treatment period (p-value<0.001) for patients in treatment arms 2 and 3. The results of the trial also showed a statistically significant difference between on-treatment CFAs for patients in treatment arms 2 and 3 relative to treatment arm 1; therefore, the trial achieved its primary efficacy endpoint. We also observed a statistically significant improvement in CNA from the baseline period to the treatment period (p-value<0.001) and a statistically significant decrease in stool weight from the baseline period to the treatment period (p-value<0.001) for patients in treatment arms 2 and 3. The trial results also indicated a trend, although not statistically significant, toward improvement in carbohydrate absorption for patients in treatment arms 2 and 3.

We also observed statistically significant improvements in CNA from the baseline period to the treatment period for patients in treatment arms 2 and 3, as compared to patients in treatment arm 1. In addition, changes in CFA and CNA were highly correlated (r=0.844, p-value<0.001), supporting the 1:1 ratio of the units of lipase and protease in the formulation. The correlation coefficient, r, is the measure of correlation between two sets of data. Based on the results of our Phase II clinical trial, we have selected a formulation of ALTU-135 consisting of 25,000 units of lipase, 25,000 units of protease and 3,750 units of amylase as the dose level for testing in our proposed Phase III clinical trial.

In treatment arm 2 there was an average 11.4 percentage point increase in CFA, from 55.6% to 67.0%, and an average 12.5 percentage point increase in CNA, from 58.8% to 71.3%, from the baseline period to the treatment period. In treatment arm 3 there was an average 17.3 percentage point increase in CFA, from 52.2% to 69.7%, and an average 17.5 percentage point increase in CNA, from 56.8% to 74.6%, from the baseline period to the treatment period. There was not a statistically significant difference between these results. Based on these increases in CFA and CNA, we believe that cystic fibrosis patients suffering from malabsorption who are treated with ALTU-135 may experience clinically meaningful improvements in fat and protein absorption, resulting in an overall improvement in nutritional status. We also believe that an improvement in nutritional status may lead to weight maintenance or weight gain in patients, both of which are important elements in the overall health of cystic fibrosis patients and others suffering from pancreatic insufficiency. According to the Cystic Fibrosis Foundation 2003 Patient Registry, approximately 35% of cystic fibrosis patients are in urgent need of improved nutrition.

We believe that an improvement in CFA of 10 percentage points or more represents a clinically meaningful benefit to patients with pancreatic insufficiency. Clinicians who treat cystic fibrosis patients typically recommend a high fat diet consistent with the diet in our Phase II clinical trial. Patients in our Phase II clinical trial consumed, on average, 100 grams of fat per day. In these patients, an average increase in fat absorption of 10 percentage points would equate to 10 grams of additional fat absorbed per day. According to the FDA, there are nine calories in a gram of fat. As a result, an improvement in CFA of 10 percentage points would equate to an additional 90 calories absorbed per day. Over a period of one year, such a 90 calorie per day increase would result in an improvement in weight of approximately nine pounds, allowing patients to either maintain weight that they may have otherwise lost or gain weight.

To gain a better understanding of the clinical impact of treatment with ALTU-135, we further analyzed the data on CFA and CNA improvements in our Phase II clinical trial, specifically focusing on differences experienced by patients who began the trial with lower levels of fat and protein absorption during the baseline period, as compared with patients who began the trial with higher baseline levels of fat and protein absorption. We examined two groups: patients who absorbed not more than 40% of their fat or protein intake during the baseline period, and patients who absorbed 41% to 80% of their fat or protein intake during the baseline period. In this retrospective analysis, we looked only at data from patients in treatment arms 2 and 3, and we pooled these two groups for purposes of the analysis, as there were no statistically significant differences between these treatment arms in improvements in CFA and CNA.

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When we analyzed those patients who absorbed not more than 40% of their fat or protein intake during the baseline period we observed the following results:

- an average increase in CFA of 31 percentage points for combined treatment arms 2 and 3, from the baseline period to the treatment period (number of patients, or n,=21)

- an average increase in CNA of 36 percentage points for combined treatment arms 2 and 3, from the baseline period to the treatment period (n=9)

In patients with fat or protein absorption of 41% to 80% during the baseline period, we observed the following results:

- an average increase in CFA of 9 percentage points for combined treatment arms 2 and 3, from the baseline period to the treatment period (n=50)

- an average increase in CNA of 13 percentage points for combined treatment arms 2 and 3, from the baseline period to the treatment period (n=60)

Based on these data, we believe cystic fibrosis patients enrolled in our Phase II clinical trial had a clinically meaningful response to ALTU-135. In particular, those subjects who had the most severe fat or protein malabsorption, which we define as patients with a CFA or CNA of not more than 40% during the baseline period, benefited the most from their treatment with ALTU-135. Based on our discussions with the FDA to date, we expect that in our Phase III clinical trial of ALTU-135, the FDA will look for ALTU-135 to provide patients who have a lower baseline CFA level a substantially greater percentage point increase in CFA than the percentage point increase in patients who have a higher baseline CFA level in order to demonstrate clinically meaningful improvement.

As noted above, the trial results also indicated a trend toward improvement in carbohydrate absorption for patients in treatment arms 2 and 3. To obtain additional insight with respect to carbohydrate absorption, we further analyzed the data retrospectively by examining all three treatment arms using a responder analysis that excluded subjects with cystic fibrosis-related diabetes, because such subjects were receiving diabetes medications that could have confounded the results. In this subgroup (n=81), we observed a marked increase in the number of subjects whom we considered responders in treatment arms 2 and 3 compared to treatment arm 1. We defined responders as patients who achieved a minimum predetermined level of glucose change during the treatment period as compared to the pre-treatment period. The number of subjects achieving this response in treatment arm 2 was statistically significant when compared to treatment arm 1 (p-value<0.01) and was approaching statistical significance for treatment arm 3 (p-value=0.0644) compared to treatment arm 1.

Safety and Tolerability Results

There were no statistically significant differences among the three treatment arms in the incidence of adverse events, or AEs, the number of related AEs, or the number of serious adverse events, or SAEs. The majority of AEs were mild in intensity, similar to previous ALTU-135 studies in cystic fibrosis subjects, and the most frequently reported AEs were gastrointestinal disorders. There were no clear differences across the treatment arms for any AEs considered to be related to ALTU-135. The majority of the SAEs were gastrointestinal and pulmonary related, which were consistent with the subjects underlying cystic fibrosis disease. Of the SAEs, only one was considered by an investigator in the trial as probably or possibly related to treatment with ALTU-135.

There were no major safety concerns identified regarding laboratory values, vital signs or physical exams. Abnormal liver transaminase values with frequent fluctuations were common among the subjects during the pre-treatment, treatment and follow-up periods, and are common in the cystic fibrosis population in general. We observed, however, more frequent liver transaminase elevations in subjects during the treatment and follow-up periods compared to the pre-treatment period. In a 1999 published study of 124 children with cystic fibrosis followed for four years, it was found that 80% had abnormal elevations in liver transaminases. Overall transaminase elevations experienced by patients in our Phase II

trial were transient, asymptomatic and not associated with increases in bilirubin. Increases in bilirubin are typically associated with harm to the liver. In addition to normal to abnormal transaminase shifts, abnormal to normal transaminase shifts were also observed across treatment groups. A causal relationship between ALTU-135 treatment and elevated liver transaminases is unclear because of the underlying liver disease, which is estimated to occur in up to 37% of cystic fibrosis patients according to published studies, and other complicating factors in these patients, including diabetes and infections.

Phase III Clinical Trial in Cystic Fibrosis Patients

We recently met with the FDA to discuss the results of our Phase II clinical trial and our planned Phase III clinical trial for the solid form of ALTU-135. Based on our discussions with the FDA, we are designing our pivotal Phase III clinical trial of ALTU-135 to be a multicenter, randomized, double-blind, placebo-controlled clinical study to determine, as the primary endpoint, the efficacy of ALTU-135 in the treatment of fat malabsorption in cystic fibrosis patients with exocrine pancreatic insufficiency through measurement of CFA. We plan on incorporating secondary endpoints in the study, including the evaluation of ALTU-135 in the treatment of protein and carbohydrate absorption through measurement of CNA and use of the starch challenge test, and in decreasing the weight of stools in patients. In the trial, we also plan on evaluating the safety and tolerability of ALTU-135 for approximately two months. The draft protocol contemplates the enrollment of approximately 150 cystic fibrosis patients over the age of seven with exocrine pancreatic insufficiency at cystic fibrosis centers in the United States, Canada and Europe. Patients will take one small capsule of ALTU-135 containing 25,000 units of lipase, 25,000 units of protease and 3,750 units of amylase with each meal or snack. We are preparing to initiate the Phase III clinical trial of the solid form of ALTU-135 in the second half of 2006 in cystic fibrosis patients and expect to complete the clinical testing in this trial in the first half of 2007.

Long-Term Safety Study

We are planning to initiate a clinical study evaluating the long-term safety of ALTU-135 in the treatment of patients with exocrine pancreatic insufficiency in the second half of 2006. This study will evaluate the safety of ALTU-135 following one year of open-label treatment in order to provide the necessary six-month and 12-month exposure data for approval of an NDA. We plan to enroll approximately 250 patients with pancreatic insufficiency from a combination of sources, including our Phase II and Phase III clinical trials of ALTU-135. The safety of ALTU-135 will be evaluated based on adverse events, physical examinations, vital signs and standard clinical laboratory testing during the one-year study period.

ALTU-238 for Growth Hormone Deficiency and Related Disorders

ALTU-238 is a crystallized formulation of hGH that is designed to be administered once weekly through a fine gauge needle for the treatment of hGH disorders in both pediatric and adult populations. Based on reported revenues of existing products, these indications generated approximately $2.2 billion in worldwide sales of hGH in 2004, and the market grew at a compound annual growth rate of approximately 15% from 2002 to 2004. We are developing ALTU-238 as a long-acting, growth hormone product that can allow patients to avoid the inconvenience of daily injections as recommended by current medical guidelines for existing products. We have used our proprietary protein crystallization technology and formulation expertise to develop ALTU-238 without altering the underlying molecule or requiring polymer encapsulation. Since hGH is a known protein molecule with an established record of safety and efficacy, we believe that ALTU-238 may have less development risk than most pharmaceutical product candidates at a similar stage of development. We have completed a Phase I clinical trial of ALTU-238 in healthy adults that was designed to determine its safety, pharmacokinetics and pharmacodynamics. Pharmacokinetics refers to the process by which a drug is absorbed, distributed, metabolized and eliminated by the body. Pharmacodynamics refers to the process by which a drug exerts its biological effect. Based on the results of our Phase I clinical trial, we recently initiated a Phase II clinical trial for ALTU-238 in adults with growth hormone deficiency and expect to have data from this trial in the first half of 2006.

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Disease Background, Market Opportunity and Limitations of Existing Products

Growth hormone, which is secreted by the pituitary gland, is the major regulator of growth in the body. Growth hormone directly stimulates the areas of bones known as epiphyseal growth plates, which are responsible for bone elongation and growth. Growth hormone also causes growth indirectly by triggering the release of insulin-like growth factor 1, or IGF-1, from tissues throughout the body. IGF-1 is a naturally occurring hormone that stimulates the growth of bone, muscle and other body tissues in response to hGH and, in turn, regulates hGH release from the pituitary gland. Growth hormone also contributes to proper bone density and plays an important role in various metabolic functions, including lipid breakdown, protein synthesis and insulin regulation.

Growth hormone deficiency typically results from an abnormality within the pituitary gland that impairs its ability to produce or secrete growth hormone. A deficiency of growth hormone can result in reduced growth in children and lead to short stature. Because the growth plates in the long bones fuse and additional cartilage and bone growth can no longer occur after puberty, hGH replacement therapy does not cause growth in adults. However, in adults low levels of hGH are also frequently associated with other metabolic disorders, including lipid abnormalities, decreased bone density, obesity, insulin resistance, decreased cardiac performance and decreased muscle mass. These disorders typically become increasingly apparent after a prolonged period of hGH deficiency, as occurs in adulthood.

Patients with growth hormone deficiency are typically treated with growth hormone replacement therapy. Growth hormone is also prescribed for many patients suffering from a range of other diseases or disorders, including pediatric growth hormone deficiency, adult growth hormone deficiency, small for gestational age and idiopathic short stature in children. According to industry estimates:

1 in 3,500 children suffer from growth hormone deficiency;

1 in 10,000 adults suffer from growth hormone deficiency;

between 3% and 10% of births annually are small for gestational age; and

between 2% and 3% of children are affected by idiopathic short stature.

Growth hormone is also used to treat Turner Syndrome, HIV/AIDS wasting, Prader Willi Syndrome and short bowel syndrome. The percentage of patients for whom hGH is prescribed varies significantly by indication. We believe that a once-weekly formulation of hGH, such as ALTU-238, may result in increased use in a number of these indications.

Currently, many of the FDA approved hGH products are also in clinical development for additional indications, including Crohn s disease, female infertility, bone regeneration and a variety of other genetic and metabolic disorders. There are currently eight FDA-approved hGH products on the market in the United States from six manufacturers, all of which use essentially the same underlying hGH molecule. Current medical guidelines for clinical practice generally recommend daily administration of existing products by subcutaneous injection. We believe that the primary differences between these products relate to their formulation and the devices employed for their delivery.

We believe that the burden of frequent injections significantly impacts quality of life for both adults and children being treated with hGH therapy and often leads to reduced compliance or a reluctance to initiate therapy. For example, we estimate that a standard course of treatment for pediatric growth hormone deficient patients typically lasts approximately six years and requires more than 1,800 injections. Faced with this protracted treatment regime, pediatric patients often take days off and miss treatment. For adults with growth hormone deficiency, the benefits of hGH treatment are more subtle and relate to metabolic function and organ health instead of increased height. As a consequence, and in contrast to hGH deficient children, many adults with growth hormone deficiency do not initiate hGH therapy, and many of those who do fail to continue treatment.

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Anticipated Advantages of ALTU-238

We expect that ALTU-238, if approved, will offer patients a more convenient and effective long-term therapy because of the following features:

Convenience of once-weekly dosing. Based on the results of our Phase I clinical trial, we believe that ALTU-238 will offer growth hormone deficient patients the convenience of a once-weekly injection. We believe this will improve compliance and thereby increase long-term effectiveness of therapy and potentially expand the market.

Administration with a fine gauge needle. ALTU-238 is designed to provide extended release without using polymers to encapsulate the component hGH molecules. To date, there has not been an hGH therapy approved by the FDA for administration once per week. The only hGH therapy approved by the FDA for administration less frequently than once per week was withdrawn from the market and required polymeric encapsulation for its extended release formulation. This necessitated the use of a substantially larger needle and prolonged injection time, which we believe led to reduced market acceptance and eventual withdrawal of the product from the market. We have designed ALTU-238 using our protein crystallization technology so that, as the crystals dissolve, the hGH is released over an extended period. This allows ALTU-238 to be administered with the same size needle as used with currently marketed products.

In addition, we have designed ALTU-238 to be manufactured using well-established equipment and processes consistent with other injectable protein products. We believe this will provide flexibility in the scale-up and commercial production of ALTU-238, if approved.

ALTU-238 Development Activities and Strategy

We have completed a Phase I clinical trial of ALTU-238 in healthy adults and recently initiated enrollment in a Phase II clinical trial in adults with growth hormone deficiency. We expect to have data from this trial in the first quarter of 2006.

Phase I Clinical Trial

In our Phase I clinical trial, we evaluated the safety, tolerability and the pharmacokinetic and pharmacodynamic profile of ALTU-238 in healthy adults. The following is a summary of our Phase I clinical trial for ALTU-238:

ALTU-238 Phase I Clinical Trial Summary

Title	A Single Blind, Single Dose, Randomized, Placebo-Controlled, Parallel Group Study of ALTU-238 in Normal Healthy Adults to Determine Pharmacokinetics, Pharmacodynamics and Drug Safety
Design	Forty-five subjects received one of the following treatment regimens: a single injection of ALTU-238 at a dose of 2.8 mg, 8.4 mg, or 16.8 mg of hGH, administered to 6 subjects at each dose; a single injection of ALTU-238 at a dose of 24.5 mg of hGH administered to 7 subjects; 7 daily injections of Nutropin AQ, a daily, FDA-approved hGH product, at a dose of 2.4 mg of hGH, administered to 6 subjects; a single injection of Nutropin AQ at a dose of 3.5 mg of hGH, administered to 6 subjects; and a single injection of placebo, administered to 8 subjects.
Administration	Each regimen was administered to patients as a subcutaneous injection.

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Safety Results	ALTU-238 was well tolerated and easily administered through 29 and 30 gauge needles. There were no serious adverse events reported in the clinical trial, and the percentage of subjects who experienced adverse events was comparable among treatment groups. Subjects across all treatment groups experienced injection site reactions, the most common of which were redness, hardening of the skin and swelling.
Clinical Activity Results	We observed a dose-dependent rise in hGH and IGF-1 concentrations following a single dose of ALTU-238. The pharmacokinetic profile of ALTU-238 at a dose of 16.8 mg indicated that the maximum concentration of hGH in the blood was achieved in approximately 51 hours and was less than the maximum concentration of hGH in the blood from a daily dose of 2.4 mg of Nutropin AQ. The IGF-1 pharmacodynamic profile over a seven-day period after a single injection of ALTU-238 at a dose of 16.8 mg was comparable to that observed with the same aggregate amount of hGH delivered through seven daily injections of Nutropin AQ.

Based on the results from the Phase I clinical trial, we believe that ALTU-238, if approved, can be administered once weekly.

Phase II Clinical Trial

In our Phase II clinical trial, we are evaluating ALTU-238 in adults with growth hormone deficiency. The primary objective of the trial is to determine the safety and tolerability of ALTU-238, as well as its pharmacokinetic and pharmacodynamic profile, when administered over a three-week period. The clinical trial consists of two treatment groups of at least six patients each. Patients will receive weekly injections of either 5.6 mg or 11.2 mg of ALTU-238, which we believe are consistent with doses for adult and pediatric indications. We will determine the pharmacokinetic and pharmacodynamic profiles of ALTU-238 by measuring hGH, IGF-1 and other parameters. We expect to have data from this trial by the first half of 2006. If our Phase II clinical trial is successful, we plan to advance ALTU-238 into a Phase III clinical trial in adults and a Phase II/III clinical trial in children in the second half of 2006. We plan to request that the FDA consider the single trial in children as a pivotal trial because we are designing the trial to meet the requirements of both a Phase II and Phase III trial. The FDA may not agree with this approach and may require additional studies in children.

We believe that our development strategy for ALTU-238 will allow us to pursue one of three approval paths. If we use a supplier with an approved NDA for its hGH product, we will seek a right of reference to the safety and efficacy data on the underlying growth hormone in our supplier s NDA, and we will file an NDA that includes additional information relating to our crystallized dosage form. However, we may not be able to obtain hGH and receive a right of reference from a supplier with an approved NDA for its hGH product. If we are not able to obtain a right of reference, and the FDA or the courts determines that approval of a new hGH product is appropriate under section 505(b)(2), we plan to submit an NDA under section 505(b)(2) of the FDCA and rely, without a right of reference, on published literature and the FDA s previous findings regarding the safety and efficacy of hGH products. We expect that either of these routes will enable us to avoid some of the non-clinical studies that would otherwise be required on the underlying hGH molecule, which may reduce the cost of developing ALTU-238 and shorten the time to market. If neither of these two routes are available, we would be required to file a full NDA under section 505(b)(1) of the FDCA, would not have the ability to refer to third-party studies, and would need to perform whatever studies are necessary to demonstrate the safety and effectiveness of ALTU-238. The availability of section 505(b)(2) for approval of ALTU-238 is uncertain. See Government Regulation and Product Approval Section 505(b)(2) Applications. If we are unable to secure a right of reference to an FDA-approved product or submit an NDA under section 505(b)(2), our cost and development time for ALTU-238 may increase.

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Our Preclinical Research and Development Programs

We are currently developing a pipeline of preclinical product candidates that are designed to either increase the amount of protein that is in short supply in the body or degrade and remove toxic metabolites from the blood stream. We are developing all of these product candidates for oral delivery to address areas of unmet need in chronic gastrointestinal and metabolic disorders, including: an oxalate degrading enzyme for the treatment of hyperoxalurias; and an enzyme that degrades phenylalanine for the treatment of phenylketonuria. We believe that our proprietary, crystallized formulations of these product candidates will represent novel or improved therapies for the treatment of these disorders. Our two most advanced preclinical product candidates are described below.

ALTU-237

Our lead preclinical product candidate, ALTU-237, is an orally-administered crystalline formulation of an oxalate-degrading enzyme which we have designed for the treatment of primary hyperoxaluria and enteric hyperoxaluria, as well as to prevent the recurrence of kidney stones in individuals with a risk or history of recurrent kidney stones. There are no current effective pharmacological treatments for primary hyperoxaluria, enteric hyperoxaluria or recurrent kidney stones. We plan to file an IND for ALTU-237 for the treatment of hyperoxalurias in early 2007.

Primary hyperoxaluria is a rare, inherited and, if left untreated, fatal metabolic disease that results in the accumulation of oxalate in the body. Oxalate is the salt form of oxalic acid, and is a natural end product of metabolism. Oxalate does not appear to be needed for any human body process, and in healthy individuals more than 90% of oxalate is excreted by the kidney, with a small amount of excretion into the lower gut. Based on prevalence data from an industry article, we estimate that between 1-in-60,000 and 1-in-120,000 children in North America and Europe are born with primary hyperoxaluria. Enteric hyperoxaluria is a condition resulting from increased intestinal absorption of oxalate, resulting in recurrent kidney and urinary stones. Enteric hyperoxaluria can occur in people who have intestinal diseases, such as Crohn s Disease and inflammatory bowel disease or may occur in patients following gastric surgery.

According to the National Kidney Foundation, kidney stone disease is a common disorder of the urinary tract affecting approximately 20 million Americans. According to Disease Management, between 70% and 75% of kidney stones are composed of calcium oxalate crystals and an estimated up to 50% of patients who do not follow recommended guidelines will suffer from a repeated kidney stone incident within five years of their initial incident. According to the National Kidney and Urologic Diseases Information Clearinghouse, in 2000, kidney stones led to approximately 600,000 emergency room visits.

In our preclinical studies using rodent models, ALTU-237, delivered orally, demonstrated an ability to reduce oxalate levels in urine. We believe that these results suggest that we may be able to use our proprietary protein crystallization technology to orally deliver enzymes to the gastrointestinal tract, where they can exert a therapeutic effect by drawing out toxic metabolites from the body. This therapeutic approach is currently utilized by some existing drugs. For example, Renagel, marketed by Genzyme Corporation, removes excess levels of phosphate in the body in patients with chronic kidney disease by delivering drug to the gastrointestinal tract, where it binds to the phosphate and removes it from the body. If we are successful in our design of ALTU-237, we believe that this program will provide a template for our other research and preclinical programs that rely on the same fundamental science and mechanism of action.

ALTU-236

We are also developing ALTU-236, an orally-administered enzyme replacement therapy designed to reduce the long-term effects associated with excess levels of phenylalanine, also known as hyperphenylalanemia. According to the National Institutes of Health, phenylketonuria, or PKU, which is the most severe form of hyperphenylalanemia, affects approximately 1-in-15,000 newborns in the United States. PKU is a rare, inherited, metabolic disorder that results from an enzyme deficiency which causes the accumulation of the amino acid phenylalanine in the body. If left untreated, PKU can result in mental retardation, swelling of the brain, delayed speech, seizures and behavior abnormalities. Virtually all newborns in the United States

and in many other countries are screened prior to leaving the hospital for PKU. PKU and hyperphenylalanemia are currently treated by placing patients on a phenylalanine restricted diet. This diet is expensive and difficult to maintain and does not avoid many of the long-term effects of PKU. There are currently no approved drugs to treat PKU. We are currently testing ALTU-236 in animal models.

Our Protein Crystallization Technology and Approach

Historically, scientists have crystallized proteins primarily for use in x-ray crystallography to examine the structure of proteins. In contrast, we are using our technology to crystallize proteins for use as therapeutic drugs. This requires the crystallization process to be both reproducible and scalable, and our technology is designed to enable large scale crystallization with batch-to-batch consistency.

Crystallized proteins are more stable, pure and concentrated than proteins in solution. For example, one protein crystal may contain several billion molecules of the underlying protein. We believe that these characteristics will enable improved storage and delivery, permitting delivery of the protein molecules with fewer capsules or smaller injection volumes.

Once a protein is in the crystallized state, we formulate it for either oral or injectable delivery. For our product candidates that will be delivered orally, we use our crystallization technology to deliver proteins to the gastrointestinal tract, where they can exert their therapeutic effect locally. In situations where we need to confer a higher level of stability to a protein, such as in the lipase component of ALTU-135, we cross-link protein molecules in crystals together using multi-functional cross-linking agents. For our product candidates that are injected, we use our crystallization technology to develop highly concentrated and stable proteins that can be formulated for extended release.

Our approach to developing therapeutic product candidates using crystallized proteins is comprised of the following general elements:

Establish initial crystallization conditions. Once we choose a target protein, we rapidly screen hundreds of crystallization conditions both manually and using robotics. We define the conditions under which a soluble protein could crystallize, including protein concentration, pH and temperature of crystallization.

Identify key crystallization conditions and initial crystallization scale up. After we identify the initial conditions, we focus on the critical crystallization conditions to define a robust and reproducible crystallization process. We then scale the process from single drops, to microliter scale, to milliliter scale, and finally, to liter scale.

Select crystallization process and crystal. If there is more than one successful crystallization process and resulting crystals, we use our target product profile to choose the best protein crystal for the given application based on crystal size, shape and other characteristics.

We apply our proprietary protein crystallization technology to existing, well-understood proteins in the development of our product candidates. We believe our technology is broadly applicable to all classes of proteins, including enzymes, hormones, antibodies, cytokines and peptides. To date, we have crystallized more than 70 proteins for evaluation in our product candidates and preclinical research and development programs.

Collaborations

Cystic Fibrosis Foundation Therapeutics, Inc.

In February 2001, we entered into a strategic alliance agreement with CFFTI, an affiliate of the Cystic Fibrosis Foundation. Under this agreement, which was amended in 2001 and 2003, we and CFTTI have agreed to collaborate for the development of ALTU-135 and specified derivatives of ALTU-135 in North America for the treatment of malabsorption due to exocrine pancreatic insufficiency in patients with cystic fibrosis and other indications. The agreement, in general terms, provides us with funding from CFFTI for a portion of the development costs of ALTU-135 upon the achievement of specified development and regulatory milestones, up to a total of $25.0 million, in return for specified payment

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obligations described below and our obligation to use commercially reasonable efforts to develop and bring ALTU-135 to market in North America for the treatment of malabsorption due to exocrine pancreatic insufficiency in patients with cystic fibrosis and other indications. CFFTI has also agreed to provide us with reasonable access to its network of medical providers, patients, researchers and others involved in the care and treatment of cystic fibrosis patients, and to use reasonable efforts to promote the involvement of these parties in the development of ALTU-135. We believe that our relationship with the Cystic Fibrosis Foundation will help facilitate our development of ALTU-135.

As of December 31, 2005, we had received a total of $18.4 million of the $25.0 million available under the agreement. In addition, we may receive an additional milestone payment of $6.6 million, less an amount determined by when we achieve the milestone. We have also issued to CFFTI warrants to purchase a total of 261,664 shares of our common stock at an exercise price of $0.02 per share. The alliance is managed by a steering committee, comprised of an equal number of representatives from Altus and CFFTI, which generally oversees the progress of our clinical development of ALTU-135 and reviews the schedule and achievement of milestones under our agreement.

Under the terms of the agreement, we granted CFFTI an exclusive license under our intellectual property rights covering ALTU-135 and specified derivatives for use in all applications and indications in North America, and CFFTI granted us back an exclusive sublicense of the same scope, including the right to grant further sublicenses. Our exclusive license to CFFTI continues in effect until the earliest to occur of our payment in full of all license fees due under the agreement, as described below; our termination of the agreement on account of a material default or bankruptcy of CFFTI; the parties mutual agreement not to proceed with development following a deadlock of the alliance steering committee; or the alliance steering committee s determination that ALTU-135 is not safe or effective for the treatment of exocrine pancreatic insufficiency or, solely due to scientific or medical reasons, that ALTU-135 should not be developed or marketed.

Our exclusive sublicense from CFFTI continues in effect until our license to CFFTI terminates or CFFTI terminates the agreement on account of our failure to meet specified milestones, our determination not to continue development after an unresolved deadlock of the alliance steering committee, or our material default or bankruptcy.

If ALTU-135 is approved by the FDA, we are obligated to pay CFFTI a license fee equal to the aggregate amount of milestone payments we have received from CFFTI, plus interest, up to a maximum of $40.0 million, less the fair market value at the time of approval of the shares of stock underlying the warrants we issued to CFFTI. This fee, together with accrued interest, will be due in four annual installments, commencing 30 days after the approval date. We are required to pay an additional $1.5 million to CFFTI within 30 days after the approval date. In addition, we are obligated to pay royalties to CFFTI on worldwide net sales by us or our sublicensees of ALTU-135 for any and all indications until the expiration of specified United States patents covering ALTU-135. We have the option to terminate our ongoing royalty obligation by making a one-time payment to CFFTI but we currently do not expect to do so. We are also required to pursue, prosecute, maintain and defend all patents covered by the agreement at our own expense.

In addition to the termination rights described above, CFFTI may terminate the agreement without cause within 30 days following the end of the fiscal quarter in which we deliver data to them from our Phase II clinical trial, which we delivered in the fourth quarter of 2005. If CFFTI terminates the agreement without cause after our delivery of Phase II clinical trial data and we subsequently commercialize ALTU-135, we are obligated to pay CFFTI royalties on net sales that are subject to a cumulative cap on our royalty obligation of $16.9 million. Based on our discussions with CFFTI to date, we expect CFFTI to continue our collaboration following its receipt of the final Phase II clinical trial data. If CFFTI terminates the agreement due to our breach, it would retain its exclusive license to ALTU-135 and our sublicense from CFFTI would terminate. Upon termination of the agreement by us due to a breach by CFFTI, the license granted to CFFTI to ALTU-135 will terminate.

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Dr. Falk Pharma GmbH

In December 2002, we entered into a development, commercialization and marketing agreement with Dr. Falk for the development by us of ALTU-135 and the commercialization by Dr. Falk of ALTU-135, if approved, in Europe, the countries of the former Soviet Union, Israel and Egypt. Under the agreement, we granted Dr. Falk an exclusive, sublicensable license under specified patents that cover ALTU-135 to commercialize ALTU-135 for the treatment of symptoms caused by exocrine pancreatic insufficiency.

As of December 31, 2005, we had received upfront and milestone payments from Dr. Falk under the agreement totaling 11.0 million. In addition, we may receive from Dr. Falk an additional 15.0 million in milestone payments based on the achievement of specified clinical and regulatory milestones. We are also eligible to receive royalties on net sales of ALTU-135 by Dr. Falk and its affiliates during the term of the license, as described below.

Under the terms of the agreement, each party is responsible for using commercially reasonable efforts to perform specified responsibilities relating to the development of ALTU-135, and Dr. Falk is responsible for using commercially reasonable efforts to obtain regulatory approvals and to commercialize ALTU-135 in the licensed territory. The agreement contemplates that, under the direction of a steering committee consisting of an equal number of representatives from Altus and Dr. Falk, we will conduct specified clinical trials, including an international Phase III clinical trial, required to support applications for regulatory approvals of ALTU-135 in the licensed territory. Dr. Falk has agreed to pay a portion of the development expenses, including costs relating to the process of obtaining regulatory approval, project management costs, statistical design and studies, and preparation of reports, that we incur in connection with the conduct of an international Phase III clinical trial. Expenses relating to other clinical trials conducted for the purpose of obtaining regulatory approvals in the licensed territory will be borne entirely by Dr. Falk.

The collaboration is coordinated through the steering committee. We maintain ultimate decision-making authority with respect to clinical development matters, subject to an obligation to exercise our decision-making authority in a manner that is consistent with the objective of managing an effective and efficient international Phase III clinical trial that satisfies the development, regulatory and commercialization requirements of the North American territory and the licensed territory and leveraging clinical development activities in both territories. Dr. Falk has responsibility for and control of commercialization matters in the licensed territory.

Under the agreement, we are responsible for supplying such quantities of ALTU-135 as may be required for the conduct of clinical trials, subject to the development expense allocation provisions of the agreement. We are also responsible for establishing a commercial scale manufacturing process for ALTU-135, for sourcing ALTU-135 from contract manufacturers, for ensuring that a second source supplier exists and, if Dr. Falk elects to purchase its requirements for commercial supply from us, for supplying Dr. Falk s requirements of ALTU-135 for commercial sale in the licensed territory. If Dr. Falk elects to purchase its requirements of ALTU-135 from us, which we expect it to do because we have not granted Dr. Falk a license to manufacture ALTU-135, the price at which Dr. Falk will purchase its requirements will equal the greater of a fixed percentage of specified Dr. Falk resale prices and our fully burdened manufacturing costs, and the other terms and conditions of supply will be governed by a commercial supply and distribution agreement to be negotiated by the parties. If our fully burdened manufacturing costs exceed the fixed percentage of the specified Dr. Falk resale prices, Dr. Falk is entitled to offset the excess against royalties due us up to a specified maximum offset amount.

Under the terms of the agreement, the license to Dr. Falk will continue in each country in the licensed territory until the later of the expiration of the last-to-expire of specified patents that cover ALTU-135 in that country or 12 years from the date of first commercial sale of ALTU-135 in that country. The current patents and the pending patent applications, if issued as patents, relating to ALTU-135 that are relevant to our agreement with Dr. Falk will expire between 2011 and 2025, excluding any extensions that we may receive. The agreement may be terminated by Dr. Falk for convenience by

providing written notice to us within 30 days after Dr. Falk s receipt of the final report for the Phase II clinical trial or Phase III clinical trial of ALTU-135. In addition, subject to specified conditions, Dr. Falk may terminate the agreement if the manufacture, use or sale of ALTU-135 in the licensed territory is enjoined due to infringement of third-party patent rights or if a clinical hold with respect to ALTU-135 is imposed in a specified country. Either party may terminate the agreement upon the commitment of an uncured material breach by the other party or upon the occurrence of specified bankruptcy or insolvency events involving the other party. Upon termination of the agreement by Dr. Falk due to a material breach by us, Dr. Falk will retain the license to ALTU-135 at a reduced royalty and have no further obligation to pay additional milestone payments. Upon termination of the agreement by us due to a material breach by Dr. Falk, the license granted to Dr. Falk to ALTU-135 will terminate.

Manufacturing

We do not own or operate manufacturing facilities for the production of clinical or commercial quantities of ALTU-135, ALTU-238 or any of the compounds that we are testing in our preclinical research and development programs. We currently have no plans to build our own clinical- or commercial-scale manufacturing capabilities, and we expect for the foreseeable future to rely on contract manufacturers for both clinical and commercial supplies of our products. Although we rely on contract manufacturers, we have personnel with manufacturing experience to oversee the relationships with our contract manufacturers.

ALTU-135

Amano is currently our sole contract manufacturer of the crystallized and cross-linked lipase, the crystallized protease, and the amylase enzymes that comprise the APIs for ALTU-135. We entered into a five-year cooperative development agreement with Amano in November 2002, which was amended in October 2005, to collaborate on process development and scale-up of API production for ALTU-135. Amano has built a plant in Nagoya, Japan to produce the enzymes for ALTU-135 in large-scale batches using microbial fermentation. The plant has not been inspected or approved by the FDA, EMEA or the Japanese Ministry of Health, Labour and Welfare. Under our agreement, Amano has supplied the APIs for ALTU-135 for our non-clinical and clinical trials to date and has agreed to supply us with APIs for our Phase III clinical trial and additional toxicology studies at a specified transfer price. Under our agreement, Amano may not sell to other parties the APIs for ALTU-135 for use in specified competitive products. We use a third party to perform fill, finish and packaging services for ALTU-135.

Under the terms of the agreement, each party has contributed technology used for the production of the APIs in ALTU-135. Each party owns intellectual property created solely by it, and jointly owns any intellectual property created jointly. Pursuant to our agreement with Amano, they have notified us that they will not be the primary manufacturer of the APIs for the initial commercial supply of ALTU-135. We expect to negotiate a new agreement with Amano that governs the commercial supply of some of the APIs for ALTU-135. Amano will be required to grant licenses of its technology to other contract manufacturers which we mutually select, and we will be required to pay Amano a royalty based on the cost of the materials supplied to us by such other contract manufacturers. We are in the process of selecting a contract manufacturer that is capable of providing us commercial quantities of APIs for ALTU-135. We are obligated under our agreement with Amano to use best efforts to develop and commercialize ALTU-135.

Our agreement with Amano expires in November 2007, unless mutually extended by the parties. The agreement may be terminated by either party upon an uncured material breach by the other party or upon specified bankruptcy or insolvency events involving the other party. In addition, either party may terminate the agreement without cause on one year s written notice to the other party. If the agreement terminates for any reason, our licenses under the agreement survive forever and, in the case of a termination for our material breach or a termination by us for reasons other than Amano s material breach, we must pay Amano royalties on worldwide sales of ALTU-135.

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ALTU-238

We currently purchase hGH from Sandoz and have no long-term supply arrangements or contracts. A product containing the hGH supplied by Sandoz has not been approved by the FDA or the EMEA. We are negotiating with various manufacturers with respect to commercial supply agreements for hGH.

We completed small-scale cGMP runs of ALTU-238 at a contract manufacturer for our Phase I and II clinical trials. We expect that we will have to secure additional manufacturing capacity with one or more contract manufacturers in order to produce ALTU-238 for our subsequent trials and on a commercial scale. We also expect to arrange for a third party to perform fill, finish and packaging services for ALTU-238.

Sales and Marketing

If we receive regulatory approval for any of our product candidates, we plan to commence commercialization activities by building a focused sales and marketing organization. Our sales and marketing strategy is to:

Build our own North American sales force. We plan to establish a commercial infrastructure and targeted specialty sales force to market our product candidates in North America. Our sales efforts for ALTU-135, if approved, will initially be focused on the 500 pediatric pulmonologists who are in approximately 100 cystic fibrosis care centers throughout the United States, as well as the 5,000 key gastroenterologists and pancreatologists who prescribe products for exocrine pancreatic insufficiency. For ALTU-238, we plan to focus initially on the approximately 400 key prescribing pediatric endocrinologists and approximately 3,000 adult endocrinologists who treat patients with growth hormone deficiency. Because the target groups for ALTU-238 are primarily hospital-based and concentrated in major metropolitan areas, we believe that we can effectively address the market for ALTU-238 with a specialized sales force that targets these key prescribers. We also plan to leverage our sales and marketing capabilities by targeting the same groups of physician specialists with multiple products that we bring to market either through our own development efforts or by in- licensing from others.

Assemble a marketing organization. We plan to build a marketing, managed care and sales management organization to create and implement marketing strategies for ALTU-135, ALTU-238 and other product candidates in our product pipeline. We expect that our marketing organization will oversee any products that we market through our own sales force and oversee and support our sales and reimbursement efforts. The responsibilities of the marketing organization will include developing educational initiatives with respect to approved products and establishing relationships with thought leaders in relevant fields of medicine. We also plan to conduct post-approval marketing studies for our products to provide further data on the safety and efficacy. As we develop our pipeline products, we will evaluate whether to expand our marketing and sales efforts.

Selectively establish collaborations for our product candidates with leading pharmaceutical and biotechnology companies. We may enter into additional collaborations in markets outside of North America where we believe that having a partner will enable us to gain better access to those markets. In addition, we may co-promote our product candidates in North America with pharmaceutical and biotechnology companies in instances where we believe that a larger sales and marketing presence will expand the market or accelerate penetration. We may also collaborate with such companies to accelerate the development of selected early-stage product candidates.

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Competition

Our major competitors are pharmaceutical and biotechnology companies in the United States and abroad that are actively engaged in the discovery, development and commercialization of products to treat gastrointestinal and metabolic disorders. Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future.

Many of the entities developing and marketing potentially competing products may have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing than we do. These entities also compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring technologies complementary to, or necessary for, our programs.

Our commercial opportunity will be reduced or eliminated if our competitors develop and commercialize products that are more effective, have fewer side effects, are more convenient or are less expensive than any products that we may develop. In addition, our ability to compete may be affected because in some cases insurers and other third-party payors seek to encourage the use of generic products. This may have the effect of making branded products less attractive, from a cost perspective, to buyers.

If our two clinical-stage product candidates are approved, they will compete with currently marketed drugs and potentially with drug candidates currently in development for the same indications, including the following:

ALTU-135. If approved, ALTU-135, the product candidate we are developing for the treatment of malabsorption due to exocrine pancreatic insufficiency, will compete with currently marketed porcine-derived pancreatic enzyme replacement therapies from Axcan Pharma, Johnson & Johnson, and Solvay Pharmaceuticals, as well as from generic drug manufacturers such as KV Pharmaceutical and IMPAX Laboratories. In April 2004, the FDA issued a notice that manufacturers of existing pancreatic enzyme replacement products will be subject to regulatory action if they do not obtain approved NDAs for these products by April 28, 2008. We believe that some of the manufacturers of these products may not be able to satisfy the FDA s requirements for NDAs. In addition, we understand that Biovitrum and Meristem Therapeutics have product candidates in clinical development that could compete with ALTU-135.

ALTU-238. If approved, ALTU-238, the product candidate we are developing as a once-weekly treatment for hGH deficiency and related disorders, will compete with approved hGH therapies from companies such as Genentech, Pfizer, Serono, Novo Nordisk, Teva Pharmaceutical Industries and Eli Lilly. In addition, we understand that ALTU-238 may compete with product candidates in clinical development from some of these companies and from others, including LG Life Sciences, which is developing a long-acting hGH therapy based on an encapsulated microparticle technology.

Key differentiating elements affecting the success of all of our product candidates are likely to be their convenience of use and efficacy and safety profile compared to other therapies.

Intellectual Property

We actively seek patent protection for the proprietary technology that we consider important to our business, including compounds, compositions and formulations, their methods of use and processes for their manufacture. In addition to seeking patent protection in the United States, we generally file patent applications in Canada, Europe, Japan and additional countries on a selective basis in order to further protect the inventions that we consider important to the development of our business worldwide. We also rely on trade secrets, know-how, continuing technological innovation and in-licensing opportunities to develop and maintain our proprietary position. Our success depends in part on our ability to obtain and

maintain proprietary protection for our product candidates, technology and know-how, to operate without infringing the proprietary rights of others, and to prevent others from infringing our proprietary rights.

Our patent portfolio includes patents and patent applications with claims relating to protein crystals, both cross-linked and not cross-linked, as well as compositions of specific protein crystals, such as lipase and hGH, and methods of making and using these compositions. In addition, we currently have patent applications relating to compositions and formulations containing both cross-linked and non-cross-linked protein crystals and patent applications relating to some of our later stage pipeline products that are not yet in clinical trials.

As of December 31, 2005, our patent estate on a worldwide basis includes 12 patents issued in the United States, 20 issued in current member states of the European Patent Convention and 19 issued in other counties, many of which are foreign counterparts of our United States patents, as well as more than 100 pending patent applications, with claims covering all of our product candidates.

Four of our issued United States patents, expiring between 2014 and 2016, relate to ALTU-135 and have claims covering cross-linked protein crystals, cross-linked enzyme crystals and methods of using those crystals in enzyme and oral protein therapy. We also have four pending United States patent applications relating to ALTU-135, which if issued as patents, would expire between 2017 and 2025. Some of these applications include claims covering a combination of lipase, protease and amylase in specific formulations and methods of treatment using these formulations. We also have 29 issued foreign patents, expiring between 2011 and 2021, relating to ALTU-135 and pending foreign patent applications, which if issued as patents, would expire between 2011 and 2025.

We have three pending United States patent applications relating to ALTU-238, which if issued as patents, would expire between 2023 and 2026, and include claims relating to hGH crystals with an extended release profile and methods of treating hGH deficiency associated disorders using such hGH crystals. We also have 30 pending foreign patent applications relating to ALTU-238, which if issued as patents, would expire in 2023.

Our patent estate includes patent applications relating to some of our other product candidates. Some of these applications are pending in the United States and foreign patent offices. Others have to date only been filed in the United States. We expect to file these outside of the United States at the appropriate time. These patent applications, assuming they issue as patents, would expire between 2017 and 2026. We also have eight other issued United States patents and various foreign counterparts that relate to cross-linked protein crystal biosensors, methods of using cross-linked crystals of thermolysin as a catalyst, specific methods of making cross-linked crystals with controlled dissolution properties, stabilized protein crystals, protein crystal formulations as catalysts in organic solvents and cross-linked glycoprotein crystals.

We hold an exclusive, royalty-free, fully-paid license from Vertex to patents relating to cross-linked enzyme crystals, including the four issued United States patents relating to ALTU-135 and two other issued United States patents relating to biosensors and thermolysin, as well as to a number of corresponding foreign patents and patent applications and know-how, including improvements developed by Vertex or its collaborators through February 2004. Under this license, Vertex retains non-exclusive rights to use the licensed Vertex patents and know-how to develop and commercialize small molecule drugs for human or animal therapeutic uses. We also granted to Vertex a non-exclusive, royalty-free, fully-paid license, under our patents and know-how with respect to cross-linked protein crystals that we have acquired, developed or licensed through February 2004, for Vertex s use in small molecule drug development and commercialization for human or animal therapeutic uses. The licenses with respect to patents, unless otherwise terminated earlier for cause, terminate on a country-by-country basis upon the expiration of each patent covered by the license.

We also have rights to specified technology developed by Amano under our cooperative development agreement with Amano, as described above under the section entitled Manufacturing.

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Individual patents extend for varying periods depending on the effective date of filing of the patent application or the date of patent issuance, and the legal term of the patents in the countries in which they are obtained. Generally, patents issued in the United States are effective for:

- the longer of 17 years from the issue date or 20 years from the earliest effective filing date, if the patent application was filed prior to June 8, 1995; and
- 20 years from the earliest effective filing date, if the patent application was filed on or after June 8, 1995.

The term of foreign patents varies in accordance with provisions of applicable local law, but typically is 20 years from the earliest effective filing date. In addition, in some instances, a patent term in the United States and outside of the United States can be extended to recapture a portion of the term effectively lost as a result of the health authority regulatory review period. These extensions, which may be as long as five years, are directed to the approved product and its approved indications. We intend to seek such extensions as appropriate.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. Our ability to maintain and solidify our proprietary position for our technology will depend on our success in obtaining effective claims and enforcing those claims once granted. We do not know whether any of our patent applications or those patent applications that are licensed to us will result in the issuance of any patents or if issued will assist our business. Our issued patents and those that may issue in the future, or those licensed to us, may be challenged, invalidated or circumvented. This could limit our ability to stop competitors from marketing related products and reduce the length of term of patent protection that we may have for our products. In addition, the rights granted under any of our issued patents may not provide us with proprietary protection or competitive advantages against competitors with similar technology. Our competitors may develop similar technologies, duplicate any technology developed by us, or use their patent rights to block us from taking the full advantage of the market. Because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that a related patent may remain in force for a short period following commercialization, thereby reducing the advantage of the patent to our business and products.

In addition to patents, we may rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets are difficult to protect. We seek to protect the trade secrets in our proprietary technology and processes, in part, by entering into confidentiality agreements with commercial partners, collaborators, employees, consultants, scientific advisors and other contractors and into invention assignment agreements with our employees and some of our commercial partners and consultants. These agreements are designed to protect our proprietary information and, in the case of the invention assignment agreements, to grant us ownership of the technologies that are developed. These agreements may be breached; and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors.

Many of our employees, consultants and contractors have worked for others in the biotechnology or pharmaceutical industries. We try to ensure that, in their work for us, they do not use the proprietary information or know-how of others. To the extent that our employees, consultants or contractors use proprietary information owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local level, and other countries extensively regulate, among other things, the research, development, testing, manufacture, labeling, packaging, promotion, storage, advertising, distribution, marketing and export and import of products such as those we are developing.

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United States Government Regulation

In the United States, the information that must be submitted to the FDA in order to obtain approval to market a new drug varies depending on whether the drug is a new product whose safety and effectiveness has not previously been demonstrated in humans or a drug whose active ingredients and some other properties are the same as those of a previously approved drug. A new drug will follow the NDA route, and a new biologic will follow the biologic license application, or BLA, route.

NDA and BLA Approval Processes

In the United States, the FDA regulates drugs and some biologics under the FDCA, and in the case of the remaining biologics, also under the Public Health Service Act, and implementing regulations. Failure to comply with the applicable United States requirements at any time during the product development process, approval process or after approval, may subject an applicant to administrative or judicial sanctions. These sanctions could include:

the FDA s refusal to approve pending applications;

license suspension or revocation;

withdrawal of an approval;

a clinical hold;

warning letters;

product recalls;

product seizures;

total or partial suspension of production or distribution; or

injunctions, fines, civil penalties or criminal prosecution.

Any agency or judicial enforcement action could have a material adverse effect on us. The process of obtaining regulatory approvals and the subsequent substantial compliance with appropriate federal, state, local, and foreign statutes and regulations require the expenditure of substantial time and financial resources.

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

completion of nonclinical laboratory tests according to good laboratory practice regulations, or GLP;

submission of an IND, which must become effective before human clinical trials may begin;

performance of adequate and well-controlled human clinical trials according to GCP to establish the safety and efficacy of the proposed drug for its intended use;

submission to the FDA of a NDA or BLA;

satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with cGMP to assure that the facilities, methods and controls are adequate to preserve the drug s identity, strength, quality and purity or to meet standards designed to ensure the biologic s continued safety, purity and potency; and

FDA review and approval of the NDA or BLA.

Once a pharmaceutical candidate is identified for development it enters the preclinical testing stage. Preclinical tests include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information and analytical data, to the FDA as part of the IND. Some preclinical or non-clinical testing may continue even after the IND is submitted. In addition to including the results of the

preclinical studies, the IND will also include a protocol detailing, among other things, the objectives of the first phase of the clinical trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated if the first phase lends itself to an efficacy determination. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, specifically places the clinical trial on clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin.

All clinical trials must be conducted under the supervision of one or more qualified investigators in accordance with GCP. These regulations include the requirement that all research subjects provide informed consent. Further, an IRB at each institution participating in the clinical trial must review and approve the plan for any clinical trial before it commences at that institution. Each new clinical protocol must be submitted to the FDA as part of the IND. Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and more frequently if serious adverse events occur.

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

Phase I: The drug is initially introduced into healthy human subjects or patients with the disease and tested for safety, dosage tolerance, pharmacokinetics, pharmacodynamics, absorption, metabolism, distribution and excretion. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.

Phase II: Involves studies in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage.

Phase III: Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical study sites. These studies are intended to establish the overall risk-benefit ratio of the product and provide, if appropriate, an adequate basis for product labeling.

Phase I, Phase II and Phase III testing may not be completed successfully within any specified period, if at all. The FDA or an IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk.

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

The results of product development, preclinical studies and clinical studies, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, results of chemical studies and other relevant information are submitted to the FDA as part of an NDA or BLA requesting approval to market the product. The submission of an NDA or BLA is subject to the payment of user fees, but a waiver of such fees may be obtained under specified circumstances. The FDA reviews all NDAs and BLAs submitted before it accepts them for filing. It may request additional information rather than accept an NDA or BLA for filing. In this event, the NDA or BLA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing.

Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA may refuse to approve an NDA or BLA if the applicable regulatory criteria are not satisfied or may require

additional clinical or other data. Even if such data is submitted, the FDA may ultimately decide that the NDA or BLA does not satisfy the criteria for approval. The FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use and whether its manufacture is cGMP-compliant to assure and preserve the product s identity, strength, quality and purity. The FDA reviews a BLA to determine, among other things whether the product is safe, pure and potent and the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product s continued safety, purity and potency. Before approving an NDA or BLA, the FDA will inspect the facility or facilities where the product is manufactured and tested.

Satisfaction of FDA requirements or similar requirements of state, local and foreign regulatory authorities typically takes at least several years and the actual time required may vary substantially, based upon, among other things, the type, complexity and novelty of the product or disease. Government regulation may delay or prevent marketing of potential products for a considerable period of time and impose costly procedures upon our activities. Success in early stage clinical trials does not assure success in later stage clinical trials. Data obtained from clinical activities are not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. The FDA may not grant approval on a timely basis, or at all. Even if a product receives regulatory approval, the approval may be significantly limited to specific diseases and dosages or the indications for use may otherwise be limited which could restrict the commercial application of the products. Further, even after regulatory approval is obtained, later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market. Delays in obtaining, or failures to obtain regulatory approvals for any drug candidate could substantially harm our business and cause our stock price to drop significantly. In addition, we cannot predict what adverse governmental regulations may arise from future United States or foreign governmental action.

Section 505(b)(2) Applications

Section 505 of the FDCA describes two types of NDAs. They are (1) an application that contains full reports of investigations of safety and effectiveness, or a section 505(b)(1) application, and (2) an application that contains full reports of investigations of safety and effectiveness but where at least some of the information required for approval comes from studies not conducted by or for the applicant and the applicant has not obtained a right of reference to such information, or a section 505(b)(2) application.

A section 505(b)(2) application route may be appropriate for a drug when some part of the data required for approval is derived from studies that the applicant did not perform and to which it has not obtained a right of reference or when the applicant intends to modify specified characteristics of a previously approved drug, such as the addition of a new indication or introduction of a new dosage form, and where studies other than bioavailability or bioequivalence are essential to the approval of the changes. Rather than having to redo studies that had been performed by the developer of the previously approved, or listed drug, a section 505(b)(2) applicant may rely on published literature and the FDA s finding of safety and effectiveness for the listed drug. A section 505(b)(2) application may be granted three years of marketing exclusivity if one or more of the clinical investigations that the applicant performed, other than bioavailability or bioequivalence studies, was essential to approval; it may be granted five years of exclusivity if it is for a new chemical entity, and it may also be eligible for orphan drug exclusivity or pediatric exclusivity. The filing or approval of a 505(b)(2) application, however, may be delayed due to patent or exclusivity protections covering the listed product.

We believe that ALTU-238 may be a candidate for the section 505(b)(2) application route because the FDA has already approved a number of NDAs for hGH, and the FDA has publicly acknowledged the safety and effectiveness of hGH. However, the availability of the section 505(b)(2) application route to ALTU-238 is unclear, in part because, unlike most other drugs regulated under the FDCA, hGH is a biologic. The FDA has informed us that the FDA has not approved any growth hormone under section 505(b)(2) and the standards of evidence to support such an approval have not been officially established. In addition, in September 2005 Sandoz filed a lawsuit in federal district court

against the FDA seeking a ruling that the FDA act on Sandoz s pending NDA submitted under section 505(b)(2) of the FDCA for its human growth hormone product, Omnitrope.

Sandoz submitted its NDA for Omnitrope in July 2003, and received a letter from the FDA dated August 31, 2004 in which the FDA indicated that it was unable at that time to reach a decision on the approvability of the application because of unspecified unresolved scientific and legal issues. No action has been taken by the FDA since that time, although Sandoz claims that the FDA informally confirmed that the FDA had completed its review and that Sandoz had answered all information requests to the FDA s satisfaction. In its complaint, Sandoz alleges that the FDA s failure to perform its non-discretionary statutory duty to either approve or refuse to approve a fully FDA-reviewed NDA violates the FDCA and the Administrative Procedure Act. Sandoz requested, among other things, that the court enter an order setting aside or causing the FDA to treat the August 31, 2004 letter as an approval and to enter a declaratory judgment that section 505(b)(2) may be used for protein-based biologic drugs regulated under section 505 of the FDCA. We cannot predict when or how the court will respond to this lawsuit or whether the FDA will voluntarily change its policy with respect to the availability of the 505(b)(2) route to Sandoz for Omnitrope or to any other company for its hGH.

Expedited Review and Approval

The FDA has various programs, including fast track, priority review and accelerated approval, that are intended to expedite or simplify the process for reviewing drugs and provide for approval on the basis of surrogate endpoints. Even if a drug qualifies for one or more of these programs, the FDA may later decide that the drug no longer meets the conditions for qualification or that the time period for FDA review or approval will be shortened. Generally, drugs that may be eligible for these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs, and those that offer meaningful benefits over existing treatments. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. Although fast track and priority review do not affect the standards for approval, the FDA will attempt to facilitate early and frequent meetings with a sponsor of a fast-track designated drug and expedite review of the application for a drug designated for priority review. Drugs that receive an accelerated approval may be approved on the basis of adequate and well-controlled clinical trials establishing that the drug product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit or on the basis of an effect on a clinical endpoint other than survival or irreversible morbidity. As a condition of approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform post-marketing clinical trials.

Continuous Marketing Applications Pilot 2

In conjunction with the reauthorization of the Prescription Drug User Fee Act of 1992, or PDUFA, the FDA agreed to meet specific performance goals, one of which was to conduct pilot programs to explore CMAs. Under one of the CMA pilot programs called Pilot 2, one fast-track designated product from each review division of CDER and CBER is selected for frequent scientific feedback and interactions with the FDA, with a goal of improving the efficiency and effectiveness of the drug development process. In order to be eligible for participation, the drug or biologic must (1) have been designated fast track, (2) have been the subject of an end-of-Phase I meeting or another type of meeting that FDA determines is equivalent, and (3) not be on clinical hold. Applicants must make a formal application as described in an FDA Guidance on the subject and will be evaluated based on the FDA s overall assessment of:

- the potential value of enhanced interaction, emphasizing the potential public health benefit resulting from development of the product;
- the likelihood that concentrated scientific dialogue will facilitate the availability of a promising novel therapy; and
- the applicant s demonstration of commitment to product development as evidenced by a thorough consideration of the rationale for participation in Pilot 2.

A maximum of one fast-track product per review division in CDER and CBER will be chosen to participate.

Once an applicant is selected for participation in Pilot 2, the review division and the applicant will finalize an agreement on the nature of the timelines for feedback and interactions between the applicant and the FDA. Pilot 2 agreements and activities for each application will continue through September 30, 2007, the pilot program completion date, unless (1) an NDA or BLA is submitted, (2) the applicant withdraws the product from the pilot program, or (3) the agreement is terminated by the FDA because the drug or biologic no longer meets the pre-application criteria or the applicant deviates significantly from the negotiated developmental plan or has other significant disagreements with FDA.

In November 2003, ALTU-135 was granted a fast track designation for treatment of malabsorption in patients with partial or complete exocrine pancreatic insufficiency. In February 2004, ALTU-135 was accepted into the Pilot 2 program pending agreement on a schedule of interactions with the FDA.

Orphan Drug Designation

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

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

We obtained orphan drug designation for ALTU-135 and intend to file for orphan drug designation for our other product candidates that meet the criteria for orphan designation. We may not be awarded orphan exclusivity for any of our product candidates or indications. In addition, obtaining FDA approval to market a product with orphan drug exclusivity may not provide us with a material commercial advantage.

Pediatric Exclusivity

The FDA Modernization Act of 1997 included a pediatric exclusivity provision that was extended by the Best Pharmaceuticals for Children Act of 2002. Pediatric exclusivity is designed to provide an incentive to manufacturers for conducting research about the safety of their products in children. Pediatric exclusivity, if granted, provides an additional six months of market exclusivity in the United States for new or currently marketed drugs. Under Section 505A of the FDCA, six months of market exclusivity may be granted in exchange for the voluntary completion of pediatric studies in accordance with an FDA-issued Written Request. The FDA may not issue a Written Request for studies on unapproved or approved indications where it determines that information relating to the use of a drug in a pediatric population, or part of the pediatric population, may not produce health benefits in that population.

We have not requested or received a Written Request for such pediatric studies, although we may ask the FDA to issue a Written Request for such studies in the future. To receive the six-month pediatric market exclusivity, we would have to receive a Written Request from the FDA, conduct the requested

studies, and submit reports of the studies in accordance with a written agreement with the FDA or, if there is no written agreement, in accordance with commonly accepted scientific principles. The FDA may not issue a Written Request for such studies if we ask for one, and it may not accept the reports of the studies. The current pediatric exclusivity provision is scheduled to end on October 1, 2007, and it may not be reauthorized.

FDA Policy on Drugs to Treat Exocrine Pancreatic Insufficiency

Drugs to treat exocrine pancreatic insufficiency have been marketed in the United States since before the passage of the FDCA in 1938. Most of these drugs were available as over the counter, or OTC, drug products. As part of an OTC drug review, and over the period that stretched from 1979 to 1991, the FDA evaluated the safety and effectiveness of drug products used to treat exocrine pancreatic insufficiency. In July 1991, the FDA announced that it had concluded that all exocrine pancreatic insufficiency drug products, whether marketed on an OTC or a prescription basis, were new drugs for which an approved application would be required for marketing. On April 28, 2004, the FDA published a notice in the Federal Register reiterating its determination that all pancreatic extract drug products are new drugs requiring an approved NDA for marketing, indicating that they should be marketed as prescription drugs only, and stating that after April 28, 2008, any prescription exocrine pancreatic insufficiency drug product being marketed without an approved NDA will be subject to regulatory action.

In April 2004, the FDA also issued for comment a draft guidance titled Guidance for Industry Exocrine Pancreatic Drug Products Submitting NDAs, also termed the PEP Guidance. A number of manufacturers of these products or the components of these products submitted comments, but final guidance has not yet been issued by the FDA. The PEP Guidance, if and when finalized, will represent the FDA s then current thinking on the topic, but will not bind the FDA or any other person. An alternative approach may be used to submit an NDA if the approach satisfies the requirements of the applicable law and regulations. The FDA has approved an NDA for only one pancreatic enzyme product, although the product is not currently on the market.

Post-Approval Requirements

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory standards is not maintained or if problems occur after the product reaches the market. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval. In addition, the FDA may require testing and surveillance programs to monitor the effect of approved products that have been commercialized, and the FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs.

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

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

Drug manufacturers and their subcontractors are required to register their manufacturing facilities with the FDA and some state agencies, and are subject to periodic unannounced inspections by the FDA and some state agencies for compliance with cGMP and other laws.

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

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

Foreign Regulation

In addition to regulations in the Untied States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sale and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The approval process varies from country to country and the time may be longer or shorter than that required for FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

Under European Union regulatory systems, we may submit marketing authorization applications either under a centralized or decentralized procedure. The centralized procedure, which is compulsory for medicines produced by biotechnology and optional for those which are highly innovative, provides for the grant of a single marketing authorization that is valid for all European Union member states. The decentralized procedure provides for mutual recognition of national approval decisions. Under this procedure, the holder of a national marketing authorization may submit an application to the remaining member states. Within 90 days of receiving the applications and assessments report each member state must decide whether to recognize approval. If a member state does not recognize the marketing authorization, the disputed points are eventually referred to the European Commission, whose decision is binding on all member states.

As in the United States, we may apply for designation of our products as orphan drugs for the treatment of specific indications in the European Union before the application for marketing authorization is made. Orphan drugs in the European Union enjoy economic and marketing benefits, including a 10-year market exclusivity period for the approved indication, but not for the same drug, unless another applicant can show that its product is safer, more effective or otherwise clinically superior to the orphan-designated product.

Reimbursement

Sales of biopharmaceutical products depend in significant part on the availability of third-party reimbursement. We anticipate third-party payors will provide reimbursement for our products. It will be time consuming and expensive for us to seek reimbursement from third-party payors. Reimbursement may not be available or sufficient to allow us to sell our products on a competitive and profitable basis.

The passage of the Medicare Prescription Drug and Modernization Act of 2003, or the MMA, imposes new requirements for the distribution and pricing of prescription drugs for Medicare beneficiaries, which may affect the marketing of our products. The MMA also introduced a new reimbursement methodology, part of which went into effect in 2004. It is not clear what effect the MMA will have on the prices paid for currently approved drugs and the pricing options for new drugs approved after January 1, 2006. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

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

We expect that there will continue to be a number of federal and state proposals to implement governmental pricing controls. While we cannot predict whether such legislative or regulatory proposals will be adopted, the adoption of such proposals could have a material adverse effect on our business, financial condition and profitability.

Facilities

As of December 31, 2005 we leased or subleased a total of approximately 55,250 square feet of office and laboratory space. The leased and subleased properties are described below:

Location	Approximate Square Footage	Use	Expiration Date
625 Putnam Avenue, Cambridge, MA	15,750	Laboratory and Office	12/31/08
618 Putnam Avenue, Cambridge, MA	3,000	Laboratory	12/31/06
125 Sidney Street, Cambridge, MA	20,500	Laboratory and Office	04/14/06
195 Albany Street, Cambridge, MA	16,000	Laboratory and Office	12/31/08

We believe that these facilities are adequate to meet our current needs, although we are presently considering options to consolidate our facilities. We believe that if additional space is needed in the future, such space will be available on commercially reasonable terms as needed.

Employees

We believe that our success will depend greatly on our ability to identify, attract and retain capable employees. As of December 31, 2005, we had 102 employees, of whom 26 hold Ph.D. or M.D. degrees. 72 of our employees are primarily engaged in research and development activities, and 30 are primarily engaged in general and administrative activities. We believe that relations with our employees are good. None of our employees is represented under a collective bargaining agreement.

Legal Proceedings

We are not currently a party to any material legal proceedings.

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MANAGEMENT

Executive Officers and Directors

Our executive officers and directors and their respective ages and positions are as follows:

Name	Age	Position
Sheldon Berkle	60	President and Chief Executive Officer; Director
Don G. Burstyn, Ph.D.	51	Vice President, Regulatory Affairs and Quality Assurance
Richard D. Forrest, Esq.	38	Corporate Counsel and Secretary
Robert Gallotto	40	Vice President, Strategic Planning and Alliance Management
Alan Kimura, M.D., Ph.D.	51	Vice President, Clinical Development and Medical Affairs
Gerhard F. Klement	53	Vice President, Manufacturing and Technical Operations
Jonathan I. Lieber	36	Vice President, Chief Financial Officer and Treasurer
Alexey L. Margolin, Ph.D.	53	Chief Scientific Officer
John P. Richard(1)	48	Chairman of the Board
Richard H. Aldrich(2)	51	Director
Lynne H. Brum(3)	41	Director
Stewart Hen(2)(3)	38	Director
Peter L. Lanciano	49	Director
Jonathan S. Leff(1)	37	Director
Manuel A. Navia, Ph.D.(2)(3)	59	Director
Jonathan D. Root, M.D.(1)(2)	45	Director
Michael S. Wyzga(1)	50	Director

(1) Member of the Audit Committee.

(2) Member of the Compensation Committee.

(3) Member of the Nominating and Governance Committee.

The following is a brief summary of the background of each of our executive officers and directors.

Sheldon Berkle joined Altus as our President and Chief Executive Officer in May 2005 and was elected as a member of our board of directors. Prior to joining us, Mr. Berkle served as Executive Vice President of Boehringer Ingelheim Pharmaceuticals Inc. from November 1994 to December 2003. In this position, Mr. Berkle was responsible for United States pharmaceutical operations, including portfolio management, new product launches, commercialization, marketing, sales, business development, mergers and acquisitions, strategic planning and alliance management. Mr. Berkle was also a co-founder of Boehringer Ingelheim Canada, a pharmaceutical company, and served as its Chief Executive Officer from 1989 to 1994. From January 2004 to April 2005, Mr. Berkle was not actively employed. Mr. Berkle holds a B.Sc. in pharmacy from the University of Manitoba and an M.B.A. from the University of Toronto.

Don G. Burstyn, Ph.D. has served as our Vice President, Regulatory Affairs and Quality Assurance since July 2004. Dr. Burstyn currently represents the Biotechnology Industry Organization on the Product Quality Research Institute Steering Committee. Before joining us, Dr. Burstyn served as Vice President of Regulatory Affairs for Alkermes, Inc., a biotechnology company, from December 1993 to March 2004, where he was responsible for leading that company s activities related to the approvals of Nutropin Depot and Risperdal Consta. From 1987 to 1993, Dr. Burstyn held various management positions at Biogen, Inc., including Director of Quality and Director of Development Operations. Dr. Burstyn worked from 1979 to 1987 as a microbiologist at the FDA. He was awarded an

FDA Award of Merit in 1985 and an FDA Group Recognition Award in 1991. Dr. Burstyn holds a B.S., an M.S. and a Ph.D. in

microbiology from the University of Maryland, where he received the Isabel R. McDonald Memorial Award in 1979.

Richard D. Forrest, Esq. has served as our Corporate Counsel and Secretary since May 2002. From September 1995 to April 2002, Mr. Forrest was a corporate lawyer with Testa, Hurwitz & Thibeault, a law firm, where he represented private and public technology companies, investment banks and venture capital funds in a variety of transactions. Prior to attending law school, Mr. Forrest was an electrical engineer with Hewlett-Packard s medical products group. Mr. Forrest received his J.D. from Harvard Law School and received a B.S. in electrical engineering and a B.A. in philosophy from Cornell University.

Robert Gallotto currently serves as our Vice President, Strategic Planning and Alliance Management. From January 2003 through December 2005, Mr. Gallotto served as our Vice President, Commercial Development and Alliance Management. Mr. Gallotto joined us in July 2001 as Director of Commercial Development where he was responsible for marketing, product planning and business development. Before joining us, Mr. Gallotto served as Vice President of Marketing and Business Development at Sage BioPharma, Inc., a pharmaceutical company, from August 1999 to June 2001. From January 1996 to July 1999, Mr. Gallotto served in various positions at Serono, Inc. and Biogen, Inc., where he was responsible for overall brand positioning, product launch planning, strategic planning and key alliance management for a portfolio of drugs including Gonal-F and Avonex. From 1987 to 1995, Mr. Gallotto served in various positions in sales, marketing and managed healthcare with The Upjohn Company. Mr. Gallotto received a B.S. in biology from Stonehill College.

Alan Kimura, M.D., Ph.D. has served as our Vice President, Clinical Development and Medical Affairs since May 2005. Prior to joining us, Dr. Kimura was Executive Director, Clinical Affairs at Transkaryotic Therapies, Inc., a pharmaceutical company, from June 2001 to May 2005, where he was involved in the clinical development of protein-based therapies for rare genetic diseases. Before joining Transkaryotic Therapies, Dr. Kimura was the Director of Clinical Development at Biochem Pharma, Inc., a pharmaceutical company, from July 1999 to June 2001. Prior to that, Dr. Kimura held various positions in clinical research and medical affairs at SmithKline Beecham Biologicals S.A. and the Wyeth-Lederle Vaccines division of American Home Products Corporation. Dr. Kimura also held bacteriology research positions in the research departments of the Praxis Biologicals and Lederle Biologicals divisions of American Cyanamid Company. Dr. Kimura received his M.D. from the University of Miami School of Medicine. He received a Ph.D. and M.S. in microbiology from the University of California, Davis and a B.A. in bacteriology from the University of California, Berkeley.

Gerhard F. Klement has served as our Vice President, Manufacturing and Technical Operations since November 2005. Prior to joining us, from June 2005 to October 2005, Mr. Klement served as Chief Technology Officer for the worldwide Biologics and Chemicals Group at Lonza Biologics, a contract manufacturer, where he was responsible for new technologies and business development. From 2003 to June 2005, Mr. Klement was the Head of Operations, USA and Chief Operating Officer Biopharmaceuticals, Worldwide at Lonza Biologics. In 2002, Mr. Klement was a self-employed consultant. From 1994 to 2002, Mr. Klement held various positions in manufacturing and engineering at Serono, Inc., a biotechnology company. Mr. Klement holds a B.Sc. from the University of Agriculture in Vienna, Austria. He received executive training in general management and leadership from IMD International Institute for Management Development in Lausanne, Switzerland and Babson College.

Jonathan I. Lieber currently serves as our Vice President, Chief Financial Officer and Treasurer. Mr. Lieber joined us in July 2002 as our Vice President, Finance. From 1998 to June 2002, Mr. Lieber was a member of SG Cowen s Health Care Investment Banking Group, most recently as a vice president focused on the biotechnology and specialty pharmaceuticals sectors. Prior to joining SG Cowen, Mr. Lieber was a member of the Health Care and High Yield Groups at Salomon Brothers Inc. Mr. Lieber received an M.B.A. in finance from the Stern School of Business of New York University and a B.Sc. in business administration from Boston University.

Alexey L. Margolin, Ph.D. has served as our Chief Scientific Officer since August 2004. He served as our Vice President of Science from 1996 to 2004 and as our Director of Research from 1993 to 1996.

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Prior to joining us, Dr. Margolin was responsible for biocatalysis activities on a global basis at Merrell Dow Research Institute. From 1986 to 1988, he worked at the Massachusetts Institute of Technology on enzyme-catalyzed processes. In 2003, Dr. Margolin was elected a fellow of the American Institute of Medicine and Biological Engineering. Dr. Margolin received his M.S. in chemistry and Ph.D. in bio-organic chemistry from Moscow University.

John P. Richard has served as chairman of our board of directors since October 2004. Mr. Richard has served as an independent strategic and commercial development advisor in the biotechnology industry since April 1999. He currently serves as Senior Business Advisor to GPC Biotech AG, a biotechnology company, as a partner of Georgia Venture Partners, a biotechnology investing firm, and as a consultant to Nomura Phase4 Ventures. He also serves as a director of Targacept, Inc., Zygogen, LLC, and Metastatix, Inc. Mr. Richard was previously Executive Vice President, Business Development at SEQUUS Pharmaceuticals, Inc., where he was responsible for negotiating the acquisition of SEQUUS by ALZA Corporation. Prior to joining SEQUUS, Mr. Richard held the positions of Vice President, Corporate Development for VIVUS, Inc. and Senior Vice President, Business Development of Genome Therapeutics Corporation, where he was responsible for establishing numerous pharmaceutical alliances. He was also co-founder and original Chief Executive Officer of IMPATH Laboratories, Inc., a leading cancer pathology reference laboratory in the United States. Mr. Richard received his M.B.A. from Harvard Business School and his B.S. from Stanford University.

Richard H. Aldrich has served as a member of our board of directors since October 2001. Since May 2001, Mr. Aldrich has headed RA Capital LLC, a biotechnology investment firm. From June 1989 to January 2001, he served as the Senior Vice President and Chief Business Officer at Vertex, a biotechnology company. Prior to joining Vertex, he headed business development at Integrated Genetics from January 1988 to June 1989. From June 1982 to January 1988, he held several managerial positions at Biogen, Inc. Mr. Aldrich currently serves on the board of directors of Combinatorx, Inc. and Sirtris Pharmaceuticals, Inc. Mr. Aldrich received a B.S. in management from Boston College and an M.B.A. from Dartmouth College s Amos Tuck School of Business Administration.

Lynne H. Brum has served as a member of our board of directors since January 2004. Ms. Brum has served as Vertex s Vice President of Corporate Communications and Financial Planning since September 1994. In this capacity, she leads Vertex s financial planning group as well as its corporate communications, investor relations and media relations programs. Ms. Brum has also been an executive officer of Vertex and a member of the senior management team since August 2001. Prior to joining Vertex in 1994, Ms. Brum served as a vice president at Feinstein Kean Healthcare, a communications and business consulting firm. Prior to that, Ms. Brum held corporate communications and research positions at Biogen, Inc. Ms. Brum holds an M.B.A. from the Simmons Graduate School of Management and a B.A. in biological sciences from Wellesley College.

Stewart Hen has served as a member of our board of directors since May 2004. Mr. Hen has been with Warburg Pincus LLC, a venture capital and private equity firm, since May 2000 and is currently a managing director, where he focuses on investments in the life sciences sector, including biotechnology, pharmaceuticals, specialty pharmaceuticals, drug delivery and diagnostics. Prior to joining Warburg Pincus, he was a management consultant at McKinsey & Company, where he advised pharmaceutical and biotechnology companies on a range of strategic management issues. Prior to joining McKinsey, he worked at Merck in research and development and manufacturing. Mr. Hen is also a director of Allos Therapeutics, Inc. and Neurogen Corporation. Mr. Hen holds an M.B.A. from The Wharton School at the University of Pennsylvania, an M.S. in chemical engineering from the Massachusetts Institute of Technology and a B.S. in chemical engineering from the University of Delaware.

Peter L. Lanciano is one of our founders and has served as a member of our board of directors since 1995. Mr. Lanciano worked with us from our founding in 1992 until October 2004, most recently as President and Chief Executive Officer from 1999 until October 2004. Mr. Lanciano also served as Vice Chairman of our board of directors from October 2004 to October 2005. Prior to joining us, Mr. Lanciano was President and Director of IG Laboratories Inc., which he founded in 1988 in conjunction with a group

of scientists from Integrated Genetics Inc. Prior to his role at IG Laboratories, Mr. Lanciano served as Corporate Controller for Integrated Genetics and Gene-Trak Systems. Mr. Lanciano holds B.S. degrees in both finance and information systems design from Bentley College and is a Certified Public Accountant.

Jonathan S. Leff has served as a member of our board of directors since May 2004. Mr. Leff has been a managing director at Warburg Pincus LLC since January 2000. Mr. Leff is responsible for Warburg Pincus North American investment activities in biotechnology, pharmaceuticals and related industries. Prior to joining Warburg Pincus, Mr. Leff was a consultant at Oliver, Wyman & Co. Mr. Leff is a director of Allos Therapeutics, Inc., Neurogen Corporation, InterMune, Inc., Sunesis Pharmaceuticals, Inc. and ZymoGenetics, Inc. Mr. Leff received an A.B. in government from Harvard College and an M.B.A. from Stanford University.

Manuel A. Navia, Ph.D. is one of our founders and has served as a member of our board of directors since 1992. He is also a member of our scientific advisory board. Dr. Navia is a drug discovery and development advisor in the Boston area. Since March 2004, Dr. Navia has been an Executive-in-Residence at Oxford Bioscience Partners, a venture capital firm. In addition, since March 2003, Dr. Navia has served as an advisor and consultant to various companies in the biotechnology industry. Prior to that time, from January 2001 to March 2003, Dr. Navia was Executive Vice President for Research at Essential Therapeutics, Inc., a biotechnology company. He was a founder of The Althexis Company, Inc. in 1997, and served as its President and Chief Executive Officer until January 2001, when it merged with Microcide Pharmaceuticals Inc. to form Essential Therapeutics. From 1989 to 1997, Dr. Navia served as Vice President and Senior Scientist at Vertex. Dr. Navia holds a Ph.D. and an M.S. in biophysics from the University of Chicago and a B.A. in physics from New York University.

Jonathan D. Root, M.D. has served as a member of our board of directors since September 2001. Having joined U.S. Venture Partners, a venture capital firm, in July 1995, Dr. Root is presently a general partner and focuses on investments in therapeutic medical devices, diagnostics, drug discovery tools and services, and biopharmaceutical development. Prior to joining U.S. Venture Partners, Dr. Root spent nine years in clinical practice, most recently on the faculty and clinical staff at The New York Hospital-Cornell Medical Center in New York City, where he was an Assistant Professor of Neurology and Director of the Neurology-Neurosurgery Special Care Unit. Dr. Root holds an A.B. in economics/government from Dartmouth College, an M.D. from the University of Florida College of Medicine, and an M.B.A. from Columbia University.

Michael S. Wyzga has served as a member of our board of directors since May 2004. Mr. Wyzga is Executive Vice President and Chief Financial Officer of Genzyme Corporation, a biotechnology company. Mr. Wyzga joined Genzyme Corp. as Vice President and Corporate Controller in March 1998, was promoted to Senior Vice President and Corporate Controller in December 1998, and to Chief Financial Officer in June 1999. Mr. Wyzga became an Executive Vice President of Genzyme Corp. in June 2003 and is responsible for its global financial reporting. Prior to joining Genzyme, Mr. Wyzga was Chief Financial Officer for Sovereign Hill Software, Inc. Prior to his role at Sovereign Hill Software, Mr. Wyzga was the Chief Financial Officer for CacheLink Corporation, and prior to that, Mr. Wyzga held various management positions at Lotus Development Corporation, including Vice President of Finance and Director of Plans and Controls. Prior to joining Lotus, Mr. Wyzga held management positions at Digital Equipment Corporation. Mr. Wyzga received an M.B.A. in business administration from Providence College and a B.S. in business administration from Suffolk University.

Board Composition

Our restated certificate of incorporation and restated bylaws provide that the authorized number of directors may be changed only by resolution of the board of directors. Ten directors are currently authorized. In accordance with our restated certificate of incorporation, immediately upon the closing of this offering, our board of directors will be divided into three classes with staggered three-year terms. At each annual meeting of stockholders following the offering, the successors to the directors whose terms

then expire will be elected to serve until the third annual meeting following the election. At the closing of this offering, our directors will be divided among the three classes as follows:

The Class I directors will be Messrs. Aldrich, Lanciano and Richard, and their terms will expire at the annual meeting of stockholders to be held in 2006;

The Class II directors will be Ms. Brum, Mr. Leff and Dr. Root, and their terms will expire at the annual meeting of stockholders to be held in 2007; and

The Class III directors will be Dr. Navia and Messrs. Berkle, Hen and Wyzga, and their terms will expire at the annual meeting of stockholders to be held in 2008.

Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors.

After the closing of this offering, entities affiliated with Warburg Pincus, one of our principal stockholders, are entitled to designate up to two individuals as candidates to our board of directors, for so long as Warburg Pincus owns 2,691,935 shares of our common stock, and one individual for so long as Warburg Pincus owns 1,794,623 shares of our common stock. We have agreed to nominate and use our reasonable efforts to cause the election of such candidates. Currently, Messrs. Hen and Leff are the members of our board of directors designated by Warburg Pincus.

Committees of the Board of Directors

Our board of directors has an audit committee, a compensation committee and a nominating and governance committee, each of which is described below.

Audit Committee

Our audit committee is composed of Messrs. Leff, Richard and Wyzga and Dr. Root, and is authorized to:

approve and retain the independent registered public accounting firm to conduct the annual audit of our books and records;

review the proposed scope and results of the audit;

review and pre-approve the independent registered public accounting firm s audit and non-audit services rendered;

approve the audit fees to be paid;

review accounting and financial controls with the independent registered public accounting firm and our financial and accounting staff;

review and approve transactions between us and our directors, officers and affiliates;

recognize and prevent prohibited non-audit services;

establish procedures for complaints received by us regarding accounting matters;

oversee internal audit functions; and

prepare the report of the audit committee that SEC rules require to be included in our annual meeting proxy statement.

The rules of the Nasdaq National Market, or Nasdaq, require that all members of the audit committee be independent directors, as defined by the rules of the Nasdaq and the SEC. The Nasdaq rules also permit a company, such as us, listing on the Nasdaq National Market in connection with its initial public offering to have only one

member of the audit committee comply with the independence requirements on the date of listing, provided that a majority of the members satisfy the requirements within 90 days after listing and all of the members satisfy the requirements within one year after listing. Currently, our Board of Directors has determined that Mr. Wyzga satisfies the independence requirements for service on the audit committee, and we are seeking other independent directors to join the audit

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committee prior to the end of the phase-in period referenced above. Our Board of Directors has also determined that Mr. Wyzga is an audit committee financial expert as defined by the SEC s rules.

Compensation Committee

Our compensation committee is composed of Messrs. Aldrich and Hen, Dr. Navia and Dr. Root, and is authorized to:

- review and recommend the compensation arrangements for management, including the compensation for our president and chief executive officer;
- establish and review general compensation policies, with the objectives of attracting and retaining superior talent, rewarding individual performance and achieving our financial goals;
- administer our stock incentive plans; and
- prepare the report of the compensation committee that SEC rules require to be included in our annual meeting proxy statement.

Currently, our board of directors has determined that Messrs. Aldrich and Hen and Dr. Root satisfy the Nasdaq independence requirements for service on the compensation committee, and we expect all members to satisfy these requirements prior to the end of the phase-in period permitted by Nasdaq.

Nominating and Governance Committee

Our nominating and governance committee is composed of Ms. Brum, Mr. Hen and Dr. Navia, and is authorized to:

- identify and nominate members of the board of directors;
- develop and recommend to the board of directors a set of corporate governance principles applicable to our company; and
- oversee the evaluation of the board of directors.

Currently, our board of directors has determined that Ms. Brum and Mr. Hen satisfy the Nasdaq independence requirements for service on the Nominating and Governance Committee, and we expect that membership of this committee will be changed to comply with these requirements prior to the end of the phase-in period permitted by Nasdaq.

Compensation of Directors

Compensation for Board Service

Between January 1, 2004 and the date of this prospectus, our non-employee directors received the following compensation for service on our board of directors and committees thereof:

Directors	Cash	Stock Options(1)
John P. Richard	$ 30,000	102,707
Richard H. Aldrich	35,000	43,611
Lynne H. Brum	17,500	
Stewart Hen	15,000	
Peter L. Lanciano		
Jonathan S. Leff	15,000	
Manuel A. Navia, Ph.D.	35,000	43,611
Jonathan D. Root, M.D.	17,500	
Michael S. Wyzga	45,000	54,514

(1) All options have a ten-year term and an exercise price of $3.92 per share, and vest quarterly over four years, except for 42,742 options granted to Mr. Richard, which were fully vested upon grant, and 5,451 options granted to Mr. Richard, which have an exercise price of $4.36 per share. In addition, all of these options may be exercised immediately for shares of restricted stock, which are subject to a repurchase right by us that lapses on the same vesting schedule as the options.

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The board of directors has adopted the following policy with respect to compensation of directors to take effect following this offering. Non-employee directors will receive options to purchase 17,444 shares of common stock, vesting quarterly over a four-year period upon initial election to the board, and options to purchase 8,722 shares, vesting quarterly over a four-year period, each year thereafter. They will also receive an annual cash retainer of $20,000. Non-employee directors serving as chairs of the nominating and governance committee and the compensation committee will also receive an option to purchase 4,361 shares of common stock initially and an option to purchase 2,181 shares each year thereafter, each vesting quarterly over a four-year period, as well as an annual cash retainer of $10,000. The non-employee director serving as the chair of the audit committee will also receive an option to purchase 4,361 shares of common stock initially and an option to purchase 2,181 shares each year thereafter, each vesting quarterly over a four year period, as well as an annual cash retainer of $12,500. Non-employee directors serving as members of committees of the board, other than the chairs of those committees, shall receive an option to purchase 2,181 shares of common stock initially and an option to purchase 1,090 shares each year thereafter, each vesting quarterly over a four-year period, as well as an annual cash retainer of $5,000, for each committee on which such person serves. Continued vesting of the options granted under the policy is subject to continued service on the board.

Peter L. Lanciano. We have an agreement with Peter L. Lanciano, our director and former Chairman of the Board, President and Chief Executive Officer. Pursuant to the agreement, effective October 29, 2004, Mr. Lanciano resigned from his positions as our Chairman of the Board, President and Chief Executive Officer, as well as from all committees of our board of directors, and was appointed Vice-Chairman of our board of directors. Pursuant to the agreement, Mr. Lanciano provided management transition and support services through October 31, 2005. In consideration for his services, Mr. Lanciano received payments at a rate equal to his most recent monthly base salary in effect prior to October 29, 2004; received a bonus in 2004 in the amount of $95,000; benefited from a continuation of vesting of his stock options during the service term; and during the service term, participated in our medical insurance plans at our cost. In 2004, Mr. Lanciano earned $56,566 under this agreement. In November 2005, we amended Mr. Lanciano s agreement to permit him to exercise any of his stock options that had vested as of October 31, 2005 until the earlier of three months after he ceases to be a member of our board of directors or December 31, 2006. In addition, Mr. Lanciano resigned as Vice Chairman of the Board effective October 31, 2005 but remains a member of our board of directors.

Manuel A. Navia, Ph.D. In 2003, we entered into a consulting agreement with Dr. Navia, pursuant to which Dr. Navia, as a scientific founder of ours, agreed to consult with our scientists, provide direction with respect to grant funding and develop relationships with potential industry partners. In 2004, we paid Dr. Navia $20,938 pursuant to this agreement. Dr. Navia no longer provides such services to us.

John P. Richard. From October 2004 to June 2005, we had an arrangement with Mr. Richard, the chairman of our board of directors, to provide management oversight services during our search for a chief executive officer. For such services, we granted him options to purchase 12,212 shares of our common stock and paid him $24,000 in fees in 2004, and granted him options to purchase 30,530 shares of our common stock and paid him $66,000 in fees and $53,250 as a bonus in 2005. All options granted to Mr. Richard under this arrangement have an exercise price of $3.92 per share, a ten-year term and were fully vested as of the date of grant.

Pursuant to our 2002 Stock Plan, in the event a merger or other reorganization event also constitutes a change of control, as defined in the plan, all options issued to directors, whether or not employees, shall become exercisable in full immediately prior to such event.