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.