

ATHERSYS, INC / NEW
Form S-1
December 09, 2011
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As filed with the Securities and Exchange Commission on December 9, 2011

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

For the quarterly period ended September 30, 2011

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Athersys, Inc.

(Exact name of registrant as specified in its charter)

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Delaware (State or other jurisdiction of incorporation or organization)	2834 (Primary Standard Industrial Classification Code Number) 3201 Carnegie Avenue Cleveland, Ohio 44115-2634 (216) 431-9900	20-4864095 (I.R.S. Employer Identification Number)
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(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Gil Van Bokkelen
Chief Executive Officer
3201 Carnegie Avenue
Cleveland, Ohio 44115-2634
(216) 431-9900

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Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective as determined by the selling stockholder named in the prospectus contained herein.

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer, and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer <input type="checkbox"/> ..	Accelerated filer <input type="checkbox"/> ..
Non-accelerated filer <input type="checkbox"/> .. (Do not check if a smaller reporting company)	Smaller reporting company <input checked="" type="checkbox"/> x

CALCULATION OF REGISTRATION FEE

Title of Each Class of	Amount	Proposed Maximum	Proposed	Amount of
Securities to be Registered	to be	Offering Price	Maximum Aggregate	Registration Fee
Common Stock, par value \$0.001 per share	Registered(1)	Per Unit(2)	Offering Price	Registration Fee
	8,000,000	\$1.52	\$12,160,000	\$1,393.54

- (1) Pursuant to Rule 416, under the Securities Act of 1933, as amended, this registration statement also covers such indeterminate number of additional shares of common stock that become issuable by reason of any stock dividend, stock split or other similar transactions.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended, based upon the average of the high and low prices of the common stock on The NASDAQ Capital Market on December 2, 2011. Under a common stock purchase agreement, Aspire Capital Fund, LLC has agreed to purchase up to \$20.0 million of shares of the Registrant's common stock.

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

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The information in this prospectus is not complete and may be changed. The selling stockholder may not sell these securities under this registration statement until the registration statement filed with the Securities and Exchange Commission is declared effective. This prospectus is not an offer to sell any securities, and the selling stockholder is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED DECEMBER 9, 2011

PROSPECTUS

8,000,000 Shares

Athersys, Inc.

Common Stock

This prospectus relates to a common stock purchase agreement that we entered into with Aspire Capital Fund, LLC (referred to in this prospectus as "Aspire Capital" or the "selling stockholder") and the potential sale of up to 8,000,000 shares of our common stock by Aspire Capital, consisting of 7,066,666 shares that we may issue at our option to Aspire Capital in the future pursuant to the terms of that purchase agreement, 666,667 shares that we previously sold to Aspire Capital pursuant to that purchase agreement, and 266,667 shares that we previously issued to Aspire Capital as consideration for entering into that purchase agreement. The prices at which Aspire Capital may sell the shares pursuant to this prospectus will be determined by the prevailing market price for the shares or in negotiated transactions. We will not receive proceeds from the sale of our shares by Aspire Capital. However, we may receive proceeds of up to an additional \$19.0 million from the sale of our common stock to Aspire Capital pursuant to that purchase agreement we entered into with Aspire Capital, once the registration statement, of which this prospectus is a part, is declared effective.

Aspire Capital is an "underwriter" within the meaning of the Securities Act of 1933, as amended.

Our common stock is listed on The NASDAQ Capital Market under the symbol "ATHX." The last sale price of our common stock on December 8, 2011, as reported by The NASDAQ Capital Market, was \$2.06 per share.

Investing in our common stock involves risk. Please read carefully the section entitled "Risk Factors" beginning on page 6 of this prospectus.

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.

Prospectus dated , 2011.

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We have not authorized anyone to provide any information other than that contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized any other person to provide you with different information. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. Neither we, nor the selling stockholder, are making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus. Our business, financial condition, operating results and prospects may have changed since that date.

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PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider before investing in our common stock. You should read this entire prospectus carefully, including the sections entitled Risk Factors and Management's Discussion and Analysis of Financial Condition and Results of Operations, and our historical consolidated financial statements and related notes included elsewhere in this prospectus. In this prospectus, unless the context requires otherwise, references to Athersys, we, our or us refer to Athersys, Inc. and its consolidated subsidiaries.

Company Overview

We are an international biopharmaceutical company that is focused in the field of regenerative medicine. We are committed to the discovery and development of best-in-class therapies designed to extend and enhance the quality of human life and have established a portfolio of therapeutic product development programs to address significant unmet medical needs in multiple disease areas. We are developing our lead platform product, MultiStem[®], a patented and proprietary allogeneic stem cell product that has been evaluated in two fully-enrolled Phase I clinical trials and is currently being evaluated in ongoing Phase II clinical trials. Our current clinical development programs are focused on treating cardiovascular disease, neurological conditions, inflammatory & immune disorders, and other conditions. These represent major areas of clinical need, as well as substantial commercial opportunities.

We believe MultiStem represents a breakthrough in the field of regenerative medicine and stem cell therapy. MultiStem is a patented and proprietary product that has demonstrated the ability to enhance tissue repair and healing in multiple ways, and could be used to treat a range of disease indications. In contrast to traditional pharmaceutical products or biologics that are capable of acting through a single biological mechanism of action, the MultiStem product can enhance healing and tissue repair through multiple distinct mechanisms in parallel, by producing multiple therapeutic factors and dynamically responding to the needs of the body resulting in a more effective therapeutic response.

The MultiStem product is unique because, unlike other approaches to regenerative medicine, it can be manufactured on a large scale, it may be administered in an off-the-shelf manner with minimal processing, can augment healing in multiple ways (and in ways that other cell therapy approaches do not appear to be capable of), and has demonstrated a consistent safety profile in both preclinical and clinical studies. Like drugs and biologics, the product is cleared from the body over time, enhancing product safety relative to other types of stem cell therapy. Even so, the therapeutic effects of treatment with MultiStem cells appear to be durable.

We believe the therapeutic and commercial potential for MultiStem is very broad, applying to multiple areas of significant unmet medical need. We are pursuing many opportunities that represent potential multi-billion dollar markets. While traditional pharmaceuticals or biologic therapies typically may be used to treat only a single disease or narrowly defined set of related conditions, MultiStem appears to have far broader potential and could be developed efficiently to treat a range of disease indications.

Working with an international network of leading investigators and prominent research and clinical institutions, we have evaluated the use of MultiStem as a potential treatment for a range of disease indications. Working collaboratively, and through our own internal efforts, we have explored the potential for MultiStem to be used in various therapeutic areas, including acute and chronic forms of cardiovascular disease, neurological conditions, inflammatory & immune disease, certain pulmonary conditions, and other areas.

To date, we have successfully advanced MultiStem product candidates into four clinical stage programs, each of which addresses a significant area of medical need, and represents a large commercial market

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opportunity. MultiStem is being evaluated in two fully-enrolled clinical trials, one exploring the potential to treat patients that have suffered a heart attack and another evaluating the potential to provide supportive care and reduce treatment side effects, such as graft versus host disease, or GvHD, for patients being treated for leukemia or related conditions. MultiStem is also being evaluated in two additional ongoing clinical programs in the neurological, inflammatory & immune disease areas. In one study, which is being conducted with our partner Pfizer Inc., or Pfizer, MultiStem is being administered to patients with inflammatory bowel disease, or IBD. In another ongoing study, we are evaluating the potential to treat patients that have suffered neurological damage from a stroke.

In addition to our MultiStem programs, we are applying our pharmaceutical discovery capabilities to identify and develop novel pharmaceuticals to treat obesity, related metabolic conditions such as diabetes, and certain neurological indications, and small molecule compounds that may be used to enhance the production or therapeutic effectiveness of MultiStem or related products, increase the product's biological potency for certain indications and lead to second or third generation products in the regenerative medicine area.

Risks Related to Our Business

Investing in our common stock involves substantial risk. You should carefully consider all of the information in this prospectus prior to investing in our common stock. There are numerous risk factors related to our business that are described under **Risk Factors** and elsewhere in this prospectus. Among these important risks are the following:

our clinical trials may not be successful, and clinical results may not reflect results seen in previously conducted preclinical studies;

we do not have adequate funding to complete development in some areas, and may not be able to access additional capital on reasonable terms or at all to complete development;

our current or future partners may not be able to adequately support development in designated areas, or they may elect to change their strategic or business priorities, and these changes may have an adverse impact on us, our development plans, or our business;

we may encounter unexpected regulatory changes that delay or impede our development and commercialization efforts;

there may be unexpected changes in intellectual property law;

product reimbursement challenges;

we may encounter manufacturing and distribution challenges; and

we may not be able to recruit or retain well qualified personnel that are necessary for us to conduct our business.

Corporate Information

We were incorporated in Delaware in 1995 and our headquarters are located at 3201 Carnegie Avenue, Cleveland, Ohio 44115. Our telephone number is (216) 431-9900. Our website is <http://www.athersys.com>. The information contained on or accessible through our website is not part of this prospectus.

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The Offering

Common stock being offered by the selling stockholder	8,000,000 shares
Common stock outstanding	24,487,260 shares (as of November 30, 2011)
Use of proceeds	The selling stockholder will receive all of the proceeds from the sale of the shares offered for sale by it under this prospectus. We will not receive proceeds from the sale of the shares by the selling stockholder. However, we may receive up to an additional \$19.0 million in proceeds from the sale of our common stock to the selling stockholder under the common stock purchase agreement described below, which we currently intend to use for working capital and general corporate purposes. See Use of Proceeds.
Risk factors	See Risk Factors beginning on page 6 and other information included in this prospectus for a discussion of factors you should carefully consider before deciding whether to invest in our common stock.
NASDAQ symbol	Our common stock is listed on The NASDAQ Capital Market, or NASDAQ, under the symbol ATHX .
Unless otherwise indicated, all information in this prospectus reflects or assumes:	

the exclusion of 4,537,826 shares of common stock authorized and reserved for future issuance under outstanding awards under our equity incentive plans;

the exclusion of 962,174 shares of common stock authorized and reserved for future issuance under our equity incentive plans;

the exclusion of 1,075 shares of common stock issuable upon exercise of additional outstanding stock options;

the exclusion of 6,435,496 shares of common stock issuable upon exercise of outstanding warrants; and

the exclusion of any additional milestone payments to our former lenders, whether in the form of cash or shares of common stock. On November 11, 2011, we entered into a common stock purchase agreement (the agreement, as amended, is referred to in this prospectus as the Purchase Agreement), with Aspire Capital Fund, LLC, an Illinois limited liability company (referred to in this prospectus as Aspire Capital or the selling stockholder), which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of \$20.0 million of shares of our common stock over the approximately 24-month term of the Purchase Agreement, should we elect to sell shares to Aspire Capital. In consideration for entering into the Purchase Agreement, concurrently with the execution of the Purchase Agreement, we issued to Aspire Capital 266,667 shares of our common stock, which we refer to as the Commitment Shares, as a commitment fee. Upon execution of the Purchase Agreement, we sold to Aspire Capital 666,667 shares of common stock, which we refer to as the Initial Purchase Shares, for an aggregate purchase price of \$1,000,000. Concurrently with entering into the Purchase Agreement, we also entered into a registration rights agreement with Aspire Capital, which we refer to as the Registration Rights Agreement, pursuant to which we agreed to file one or more registration statements, including the registration statement of which this prospectus

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is a part, as permissible and necessary to register under the Securities Act of 1933, as amended, or the Securities Act, the sale of the shares of our common stock that have been and may be issued to Aspire Capital under the Purchase Agreement.

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As of November 30, 2011, there were 24,487,260 shares of our common stock outstanding. The 8,000,000 shares of our common stock offered hereby represent approximately 32.7% of the total number of shares of our common stock outstanding as of November 30, 2011. The number of shares of our common stock ultimately offered for sale by Aspire Capital is dependent upon the number of shares purchased by Aspire Capital under the Purchase Agreement.

Pursuant to the Purchase Agreement and the Registration Rights Agreement, we are registering under the Securities Act 8,000,000 shares of our common stock, which includes the Commitment Shares and the Initial Purchase Shares that have already been issued to Aspire Capital and an additional 7,066,666 shares of common stock that we may issue to Aspire Capital after the registration statement of which this prospectus is a part is declared effective under the Securities Act. All 8,000,000 shares of common stock are being offered pursuant to this prospectus.

After the SEC has declared effective the registration statement of which this prospectus is a part, we have the right, in our sole discretion, to present Aspire Capital with a purchase notice (each, a "Purchase Notice"), directing Aspire Capital (as principal) to purchase up to 100,000 shares of our common stock per trading day, provided that the aggregate price of such purchase shall not exceed \$500,000 per trading day, up to an additional \$19.0 million of our common stock in the aggregate at a per share price (the "Purchase Price") calculated by reference to the prevailing market price of our common stock (as more specifically described below).

In addition, on any date on which we submit a Purchase Notice to Aspire Capital in an amount equal to 100,000 shares, we also have the right, in our sole discretion, to present Aspire Capital with a volume-weighted average price purchase notice (each, a "VWAP Purchase Notice") directing Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of the Company's common stock traded on The NASDAQ Capital Market on the next trading day (the "VWAP Purchase Date"), subject to a maximum number of shares we may determine (the "VWAP Purchase Share Volume Maximum") and a minimum trading price (the "VWAP Minimum Price Threshold") (as more specifically described below). The purchase price per Purchase Share pursuant to such VWAP Purchase Notice (the "VWAP Purchase Price") is calculated by reference to the prevailing market price of our common stock (as more specifically described below).

The Purchase Agreement provides that in no event will any shares of common stock be sold at a Purchase Price less than \$1.45, or the Floor Price, unless and until such time as the stockholders of the Company approve the transaction contemplated by the Purchase Agreement. This Floor Price and the respective prices and share numbers in the preceding paragraphs shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction. Additionally, the Purchase Agreement provides that the Company and Aspire Capital shall not effect any sales under the Purchase Agreement if such shares proposed to be issued and sold, when aggregated with all other shares of the Company's common stock that Aspire Capital and its affiliates beneficially own, would result in Aspire Capital and its affiliates beneficially owning more than 19.99% of the Company's then issued and outstanding common stock.

There are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Aspire Capital. Aspire Capital has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. There are no limitations on use of proceeds, financial or business covenants, restrictions on future fundings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement. The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

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The following is a summary of our financial position. The summary consolidated financial data set forth below should be read in conjunction with Selected Consolidated Financial Data, Management's Discussion and Analysis of Financial Condition and Results of Operations and the consolidated financial statements and the notes thereto included elsewhere in this prospectus.

	Year Ended December 31,			Nine Months Ended September 30,	
	2008	2009	2010	2010	2011
	(in thousands, except per share data)				
Consolidated Statement of Operations Data:					
Contract and grant revenues	\$ 3,105	\$ 2,159	\$ 8,939	\$ 5,607	\$ 7,779
Operating expenses	22,197	17,774	20,450	15,034	17,283
Loss from operations	(19,092)	(15,615)	(11,511)	(9,427)	(9,504)
Other income, net	1,100	249	134	101	10
Net loss	\$ (17,992)	\$ (15,366)	\$ (11,377)	\$ (9,326)	\$ (9,494)
Basic and diluted net loss per common share	\$ (0.95)	\$ (0.81)	\$ (0.60)	\$ (0.49)	\$ (0.41)

Weighted average shares used in computing basic and diluted net loss per common share

18,928 18,928 18,930 18,929 22,966

Please see Note A to our consolidated financial statements contained elsewhere in this prospectus for an explanation of the method used to calculate net loss attributable to common stockholders, basic and diluted net loss per common share, and the number of shares used in the computation of per share amounts.

	December 31, 2010	September 30, 2011
	(in thousands)	
Consolidated Balance Sheet Data:		
Cash, cash equivalents and available-for-sale securities	\$ 15,181	\$ 16,542
Working capital	9,106	10,333
Total assets	19,106	18,861
Warrant liability		1,100
Total stockholders' equity	9,005	10,579

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RISK FACTORS

An investment in our common stock involves a high degree of risk. Accordingly, you should carefully consider the following risk factors, together with all of the other information contained in this prospectus, including our consolidated financial statements and related notes, before making an investment in our common stock. If any of the following risks actually occurs, we may not be able to conduct our business as currently planned, and our business, operating results and financial condition could be harmed. In that case, the market price of our common stock could decline, and you could lose all or a part of your investment.

Risks Related To Our Business and Our Industry

We have incurred losses since inception and we expect to incur significant net losses in the foreseeable future and may never become profitable.

Since our inception in 1995, we have incurred significant losses and negative cash flows from operations. We incurred net losses of \$18 million in 2008, \$15 million in 2009 and \$11 million in 2010. As of September 30, 2011, we had an accumulated deficit of \$215 million, and anticipate incurring additional losses for at least the next several years. We expect to spend significant resources over the next several years to enhance our technologies and to fund research and development of our pipeline of potential products. To date, substantially all of Athersys' revenue has been derived from corporate collaborations, license agreements and government grants. In order to achieve profitability, we must develop products and technologies that can be commercialized by us or through future collaborations. Our ability to generate revenues and become profitable will depend on our ability, alone or with potential collaborators, to timely, efficiently and successfully complete the development of our product candidates. We have never earned revenue from selling a product and we may never do so, as none of our product candidates have been approved for sale, since they are currently being tested yet in humans and animal studies. We cannot assure you that we will ever earn revenue or that we will ever become profitable. If we sustain losses over an extended period of time, we may be unable to continue our business.

We will need substantial additional funding to develop our products and for our future operations. If we are unable to obtain the funds necessary to do so, we may be required to delay, scale back or eliminate our product development activities or may be unable to continue our business.

The development of our product candidates will require a commitment of substantial funds to conduct the costly and time-consuming research, which may include preclinical and clinical testing, necessary to obtain regulatory approvals and bring our products to market. Net cash used in our operations was \$16 million in 2008, \$5 million in 2009 and \$11 million in 2010 and \$10 million for the nine months ended September 30, 2011.

At September 30, 2011, we had \$16.5 million of cash, cash equivalents and investments, and we will need substantially more to advance our product candidates through development. Furthermore, we will need to add additional capital to fund our operations through the completion of our current clinical trials. Our future capital requirements will depend on many factors, including:

our ability to raise capital to fund our operations;

the progress and costs of our research and development programs, including our ability to develop our current portfolio of therapeutic products, or discover and develop new ones;

our ability, or our partners ability and willingness, to advance partnered products or programs, and the speed in which they are advanced;

the cost of prosecuting, defending and enforcing patent claims and other intellectual property rights;

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the progress, scope, costs, and results of our preclinical and clinical testing of any current or future pharmaceutical or MultiStem related products;

the time and cost involved in obtaining regulatory approvals;

the cost of manufacturing our product candidates;

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expenses related to complying with good manufacturing practices, or GMP, of therapeutic product candidates;

costs of financing the purchases of additional capital equipment and development technologies;

competing technological and market developments;

our ability to establish and maintain collaborative and other arrangements with third parties to assist in bringing our products to market and the cost of such arrangements;

the amount and timing of payments or equity investments that we receive from collaborators or changes in or terminations of future or existing collaboration and licensing arrangements and the timing and amount of expenses we incur to supporting these collaborations and license agreements;

costs associated with the integration of any new operation, including costs relating to future mergers and acquisitions with companies that have complementary capabilities;

expenses related to the establishment of sales and marketing capabilities for products awaiting approval or products that have been approved;

the level of our sales and marketing expenses; and

our ability to introduce and sell new products.

The extent to which we utilize the Purchase Agreement with Aspire Capital as a source of funding will depend on a number of factors, including the prevailing market price of our common stock, the volume of trading in our common stock and the extent to which we are able to secure funds from other sources. The number of shares that we may sell to Aspire Capital under the Purchase Agreement on any given day and during the term of the agreement is limited. See The Aspire Capital Transaction section of this prospectus for additional information. Additionally, we and Aspire Capital may not effect any sales of shares of our common stock under the Purchase Agreement during the continuance of an event of default or at a purchase price of less than \$1.45. Even if we are able to access the full \$20.0 million under the Purchase Agreement, we will still need additional capital to fully implement our business, operating and development plans.

We have secured capital historically from grant revenues, collaboration proceeds, and debt and equity offerings. We will need to secure substantial additional capital to fund our future operations. We cannot be certain that additional capital will be available on acceptable terms or at all. In recent years, it has been difficult for companies to raise capital due to a variety of factors, which may or may not continue. To the extent we raise additional capital through the sale of equity securities, the ownership position of our existing stockholders could be substantially diluted. If additional funds are raised through the issuance of preferred stock or debt securities, these securities are likely to have rights, preferences and privileges senior to our common stock. Fluctuating interest rates could also increase the costs of any debt financing we may obtain.

Failure to successfully address ongoing liquidity requirements will have a material adverse effect on our business. If we are unable to obtain additional capital on acceptable terms when needed, we may be required to take actions that harm our business and our ability to achieve cash flow in the future, including possibly the surrender of our rights to some technologies or product opportunities, delaying our clinical trials or curtailing or ceasing operations.

We are heavily dependent on the successful development and commercialization of MultiStem products, and if we encounter delays or difficulties in the development of this product candidate, our business could be harmed.

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Our success is heavily dependent upon the successful development of MultiStem products for certain diseases and conditions involving acute or ischemic injury or immune system dysfunction. Our business could be materially harmed if we encounter difficulties in the development of this product candidate, such as:

delays in the ability to manufacture the product in quantities or in a form that is suitable for any required preclinical studies or clinical trials;

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delays in the design, enrollment, implementation or completion of required preclinical studies and clinical trials;

an inability to follow our current development strategy for obtaining regulatory approval from the FDA because of changes in the regulatory approval process;

less than desired or complete lack of efficacy or safety in preclinical studies or clinical trials; and

intellectual property constraints that prevent us from making, using, or commercializing the product candidate.

The results seen in animal testing of our product candidates may not be replicated in humans.

This prospectus discusses the safety and efficacy seen in preclinical testing of our lead product candidates, including MultiStem, in animals, but we may not see positive results when our other product candidates undergo clinical testing in humans in the future. Preclinical studies and Phase I clinical trials are not primarily designed to test the efficacy of a product candidate in humans, but rather to:

test short-term safety and tolerability;

study the absorption, distribution, metabolism and elimination of the product candidate;

study the biochemical and physiological effects of the product candidate and the mechanisms of the drug action and the relationship between drug levels and effect; and

understand the product candidate's side effects at various doses and schedules.

Success in preclinical studies or completed clinical trials does not ensure that later studies or trials, including continuing non-clinical studies and large-scale clinical trials, will be successful nor does it necessarily predict future results. The rate of failure in drug development is quite high, and many companies in the biotechnology and pharmaceutical industries have suffered significant setbacks in advanced clinical trials, even after promising results in earlier trials. Product candidates may fail to show desired safety and efficacy in larger and more diverse patient populations in later stage clinical trials, despite having progressed through early stage trials. Negative or inconclusive results from any of our ongoing preclinical studies or clinical trials could result in delays, modifications, or abandonment of ongoing or future clinical trials and the termination of our development of a product candidate. Additionally, even if we are able to successfully complete pivotal Phase III clinical trials, the FDA still may not approve our product candidates.

Our product candidates are in an early stage of development and we currently have no therapeutic products approved for sale. If we are unable to develop, obtain regulatory approval or market any of our product candidates, our financial condition will be negatively affected, and we may have to curtail or cease our operations.

We are in the early stage of product development, and we are dependent on the application of our technologies to discover or develop therapeutic product candidates. We currently do not sell any approved therapeutic products and do not expect to have any products commercially available for several years, if at all. You must evaluate us in light of the uncertainties and complexities affecting an early stage biotechnology company. Our product candidates require additional research and development, preclinical testing, clinical testing and regulatory review and/or approvals or clearances before marketing. To date, no one to our knowledge has commercialized any therapeutic products using our technologies and we might never commercialize any product using our technologies and strategy. In addition, we may not succeed in developing new product candidates as an alternative to our existing portfolio of product candidates. If our current product candidates are delayed or fail, or we fail to successfully develop and commercialize new product candidates, our financial condition may be negatively affected, and we may have to curtail or cease our operations.

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We may not successfully maintain our existing collaborative and licensing arrangements, or establish new ones, which could adversely affect our ability to develop and commercialize our product candidates.

A key element of our business strategy is to commercialize some of our product candidates through collaborations with other companies. Our strategy includes establishing collaborations and licensing agreements with one or more pharmaceutical, biotechnology or device companies, preferably after we have advanced product candidates through the initial stages of clinical development. However, we may not be able to establish or maintain such licensing and collaboration arrangements necessary to develop and commercialize our product candidates. Even if we are able to maintain or establish licensing or collaboration arrangements, these arrangements may not be on favorable terms and may contain provisions that will restrict our ability to develop, test and market our product candidates. Any failure to maintain or establish licensing or collaboration arrangements on favorable terms could adversely affect our business prospects, financial condition or ability to develop and commercialize our product candidates.

Our agreements with our collaborators and licensees may have provisions that give rise to disputes regarding the rights and obligations of the parties. These and other possible disagreements could lead to termination of the agreement or delays in collaborative research, development, supply, or commercialization of certain product candidates, or could require or result in litigation or arbitration. Moreover, disagreements could arise with our collaborators over rights to intellectual property or our rights to share in any of the future revenues of products developed by our collaborators. These kinds of disagreements could result in costly and time-consuming litigation. Any such conflicts with our collaborators could reduce our ability to obtain future collaboration agreements and could have a negative impact on our relationship with existing collaborators.

Currently, our material collaborations and licensing arrangements are our collaboration with Pfizer to develop and commercialize MultiStem for the treatment of IBD, our collaboration agreement with Bristol-Myers Squibb pursuant to which we provide cell lines produced using our Random Activation of Gene Expression, or RAGE, technology, our collaboration with RTI Biologics, or RTI, to develop and commercialize Multipotent Adult Progenitor Cell, or MAPC, technology-based biologic implants for certain orthopedic applications in the bone graft substitutes market, and our license with the University of Minnesota pursuant to which we license certain aspects of the MultiStem technology. These arrangements do not have specific termination dates; rather, each arrangement terminates upon the occurrence of certain events.

If our collaborators do not devote sufficient time and resources to successfully carry out their contracted duties or meet expected deadlines, we may not be able to advance our product candidates in a timely manner or at all.

Our success depends on the performance by our collaborators of their responsibilities under our collaboration arrangements. Some potential collaborators may not perform their obligations in a timely fashion or in a manner satisfactory to us. Typically, we cannot control the amount of resources or time our collaborators may devote to our programs or potential products that may be developed in collaboration with us. We are currently involved in multiple research and development collaborations with academic and research institutions. These collaborators frequently depend on outside sources of funding to conduct or complete research and development, such as grants or other awards. In addition, our academic collaborators may depend on graduate students, medical students, or research assistants to conduct certain work, and such individuals may not be fully trained or experienced in certain areas, or they may elect to discontinue their participation in a particular research program, creating an inability to complete ongoing research in a timely and efficient manner. As a result of these uncertainties, we are unable to control the precise timing and execution of any experiments that may be conducted.

Additionally, our current or future corporate collaborators will retain the ability to pursue other research, product development or commercial opportunities that may be directly competitive with our programs. If these collaborators elect to prioritize or pursue other programs in lieu of ours, we may not be able to advance product

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development programs in an efficient or effective manner, if at all. If a collaborator is pursuing a competitive program and encounters unexpected financial or capability limitations, they may be motivated to reduce the priority placed on our programs or delay certain activities related to our programs or be unwilling to properly fund their share of the development expenses for our programs. Any of these developments could harm our product and technology development efforts, which could seriously harm our business.

Even if we or our collaborators receive regulatory approval for our products, those products may never be commercially successful.

Even if we develop pharmaceuticals or MultiStem related products that obtain the necessary regulatory approval, and we have access to the necessary manufacturing, sales, marketing and distribution capabilities that we need, our success depends to a significant degree upon the commercial success of those products. If these products fail to achieve or subsequently maintain market acceptance or commercial viability, our business would be significantly harmed because our future royalty revenue or other revenue would be dependent upon sales of these products. Many factors may affect the market acceptance and commercial success of any potential products that we may discover, including:

health concerns, whether actual or perceived, or unfavorable publicity regarding our obesity drugs, stem cell products or those of our competitors;

the timing of market entry as compared to competitive products;

the rate of adoption of products by our collaborators and other companies in the industry;

any product labeling that may be required by the FDA or other United States or foreign regulatory agencies for our products or competing or comparable products;

convenience and ease of administration;

pricing;

perceived efficacy and side effects;

marketing;

availability of alternative treatments;

levels of reimbursement and insurance coverage; and

activities by our competitors.

We may experience delays in clinical trials and regulatory approval relating to our products that could adversely affect our financial results and our commercial prospects for our pharmaceutical or stem cell products.

In addition to the regulatory requirements for our pharmaceutical programs, we will also require regulatory approvals for each distinct application of our stem cell product. In each case, we will be required to conduct clinical trials to demonstrate safety and efficacy of MultiStem,

or various products that incorporate or use MultiStem. For product candidates that advance to clinical testing, we cannot be certain that we or a collaborator will successfully complete the clinical trials necessary to receive regulatory product approvals. This process is lengthy and expensive.

We intend to seek approval for our product candidates through the FDA approval process. To obtain regulatory approvals, we must, among other requirements, complete clinical trials showing that our products are safe and effective for a particular indication. Under the approval process, we must submit clinical and non-clinical data to demonstrate the medication is safe and effective. For example, we must be able to provide

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data and information, which may include extended pharmacology, toxicology, reproductive toxicology, bioavailability and genotoxicity studies to establish suitability for Phase II or large scale Phase III clinical trials.

All of our product candidates are at an early stage of development. As these programs enter and progress through early stage clinical development, or complete additional non-clinical testing, an indication of a lack of safety or lack of efficacy may result in the early termination of an ongoing trial, or may cause us or any of our collaborators to forego further development of a particular product candidate or program. The FDA or other regulatory agencies may require extensive clinical trials or other testing prior to granting approval, which could be costly and time consuming to conduct. Any of these developments would hinder, and potentially prohibit, our ability to commercialize our product candidates. We cannot assure you that clinical trials will in fact demonstrate that our products are safe or effective.

Additionally, we may not be able to find acceptable patients or may experience delays in enrolling patients for our currently planned or any future clinical trials. The FDA or we may suspend our clinical trials at any time if either believes that we are exposing the subjects participating in the trials to unacceptable health risks. The FDA or institutional review boards and/or institutional biosafety committees at the medical institutions and healthcare facilities where we seek to sponsor clinical trials may not permit a trial to proceed or may suspend any trial indefinitely if they find deficiencies in the conduct of the trials.

Product development costs to us and our potential collaborators will increase if we have delays in testing or approvals or if we need to perform more or larger clinical trials than planned. We expect to continue to rely on third party clinical investigators at medical institutions and healthcare facilities to conduct our clinical trials, and, as a result, we may face additional delaying factors outside our control. Significant delays may adversely affect our financial results and the commercial prospects for our product candidates and delay our ability to become profitable.

If our pharmaceutical product candidates do not successfully complete the clinical trial process, we will not be able to partner or market them. Even successful clinical trials may not result in a partnering transaction or a marketable product and may not be entirely indicative of a product's safety or efficacy.

Many factors, known and unknown, can adversely affect clinical trials and the ability to evaluate a product's efficacy. During the course of treatment, patients can die or suffer other adverse events for reasons that may or may not be related to the proposed product being tested. Even if unrelated to our product, certain events can nevertheless adversely impact our clinical trials. As a result, our ability to ultimately develop and market the products and obtain revenues would suffer.

Even promising results in preclinical studies and initial clinical trials do not ensure successful results in later clinical trials, which test broader human use of our products. Many companies in our industry have suffered significant setbacks in advanced clinical trials, despite promising results in earlier trials. Even successful clinical trials may not result in a marketable product or be indicative of the efficacy or safety of a product. Many factors or variables could affect the results of clinical trials and cause them to appear more promising than they may otherwise be. Product candidates that successfully complete clinical trials could ultimately be found to be unsafe or ineffective. In addition, our ability to complete clinical trials depends on many factors, including obtaining adequate clinical supplies and having a sufficient rate of patient recruitment. For example, patient recruitment is a function of many factors, including:

the size of the patient population;

the proximity of patients to clinical sites;

the eligibility criteria for the trial;

the perceptions of investigators and patients regarding safety; and

the availability of other treatment options.

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Even if we obtain regulatory approval of any of our product candidates, the approved products may be subject to post-approval studies and will remain subject to ongoing regulatory requirements. If we fail to comply, or if concerns are identified in subsequent studies, our approval could be withdrawn and our product sales could be suspended.

If we are successful at obtaining regulatory approval for MultiStem or any of our other product candidates, regulatory agencies in the United States and other countries where a product will be sold may require extensive additional clinical trials or post-approval clinical studies that are expensive and time consuming to conduct. In particular, therapeutic products administered for the treatment of persistent or chronic conditions, such as obesity, are likely to require extensive follow-up studies and close monitoring of patients after regulatory approval has been granted, for any signs of adverse effects that occur over a long period of time. These studies may be expensive and time consuming to conduct and may reveal side effects or other harmful effects in patients that use our therapeutic products after they are on the market, which may result in the limitation or withdrawal of our drugs from the market. Alternatively, we may not be able to conduct such additional trials, which might force us to abandon our efforts to develop or commercialize certain product candidates. Even if post-approval studies are not requested or required, after our products are approved and on the market, there might be safety issues that emerge over time that require a change in product labeling or that require withdrawal of the product from the market, which would cause our revenue to decline.

Additionally, any products that we may successfully develop will be subject to ongoing regulatory requirements after they are approved. These requirements will govern the manufacturing, packaging, marketing, distribution, and use of our products. If we fail to comply with such regulatory requirements, approval for our products may be withdrawn, and product sales may be suspended. We may not be able to regain compliance, or we may only be able to regain compliance after a lengthy delay, significant expense, lost revenues and damage to our reputation.

We may rely on third parties to manufacture our MultiStem product candidate.

Our current business strategy relies on third parties to manufacture our MultiStem product candidates in accordance with good manufacturing practices established by the FDA, or similar regulations in other countries. These third parties may not deliver sufficient quantities of our MultiStem product candidates, manufacture MultiStem product candidates in accordance with specifications, or comply with applicable government regulations. Additionally, if the manufactured products fail to perform as specified, our business and reputation could be severely impacted.

We expect to enter into additional manufacturing agreements for the production of product materials. If any manufacturing agreement is terminated or any third party collaborator experiences a significant problem that could result in a delay or interruption in the supply of product materials to us, there are very few contract manufacturers who currently have the capability to produce our MultiStem product on acceptable terms, or on a timely and cost-effective basis. We cannot assure you that manufacturers on whom we will depend will be able to successfully produce our MultiStem product on acceptable terms, or on a timely or cost-effective basis. We cannot assure you that manufacturers will be able to manufacture our products in accordance with our product specifications or will meet FDA or other requirements. We must have sufficient and acceptable quantities of our product materials to conduct our clinical trials and ultimately to market our product candidates, if and when such products have been approved by the FDA for marketing. If we are unable to obtain sufficient and acceptable quantities of our product material, we may be required to delay the clinical testing and marketing of our products.

If we do not comply with applicable regulatory requirements in the manufacture and distribution of our product candidates, we may incur penalties that may inhibit our ability to commercialize our products and adversely affect our revenue.

Our failure or the failure of our potential collaborators or third party manufacturers to comply with applicable FDA or other regulatory requirements including manufacturing, quality control, labeling, safety

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surveillance, promoting and reporting may result in criminal prosecution, civil penalties, recall or seizure of our products, total or partial suspension of production or an injunction, as well as other regulatory action against our product candidates or us. Discovery of previously unknown problems with a product, supplier, manufacturer or facility may result in restrictions on the sale of our products, including a withdrawal of such products from the market. The occurrence of any of these events would negatively impact our business and results of operations.

If we are unable to create and maintain sales, marketing and distribution capabilities or enter into agreements with third parties to perform those functions, we will not be able to commercialize our product candidates.

We currently have no sales, marketing or distribution capabilities. Therefore, to commercialize our product candidates, if and when such products have been approved and are ready for marketing, we expect to collaborate with third parties to perform these functions. We will either need to share the value generated from the sale of any products and/or pay a fee to the contract sales organization. If we establish any such relationships, we will be dependent upon the capabilities of our collaborators or contract service providers to effectively market, sell, and distribute our product. If they are ineffective at selling and distributing our product, or if they choose to emphasize other products over ours, we may not achieve the level of product sales revenues that we would like. If conflicts arise, we may not be able to resolve them easily or effectively, and we may suffer financially as a result. If we cannot rely on the sales, marketing and distribution capabilities of our collaborators or of contract service providers, we may be forced to establish our own capabilities. We have no experience in developing, training or managing a sales force and will incur substantial additional expenses if we decide to market any of our future products directly. Developing a marketing and sales force is also time consuming and could delay launch of our future products. In addition, we will compete with many companies that currently have extensive and well-funded marketing and sales operations. Our marketing and sales efforts may be unable to compete successfully against these companies.

If we are unable to attract and retain key personnel and advisors, it may adversely affect our ability to obtain financing, pursue collaborations or develop our product candidates.

We are highly dependent on our executive officers Gil Van Bokkelen, Ph.D., our Chief Executive Officer, as well as other executive and scientific officers, including William Lehmann, J.D., M.B.A., President and Chief Operating Officer, John Harrington, Ph.D., Chief Scientific Officer and Executive Vice President, Robert Deans, Ph.D., Executive Vice President, Regenerative Medicine, and Laura Campbell, CPA, Vice President of Finance, as well as other personnel.

These individuals are integral to the development and integration of our technologies and to our present and future scientific collaborations, including managing the complex research processes and the product development and potential commercialization processes. Given their leadership, extensive technical, scientific and financial expertise and management and operational experience, these individuals would be difficult to replace. Consequently, the loss of services of one or more of these named individuals could result in product development delays or the failure of our collaborations with current and future collaborators, which, in turn, may hurt our ability to develop and commercialize products and generate revenues.

Our future success depends on our ability to attract, retain and motivate highly qualified management and scientific, development and commercial personnel and advisors. If we are unable to attract and retain key personnel and advisors, it may negatively affect our ability to successfully develop, test and commercialize our product candidates.

Our ability to compete in the biopharmaceutical market may decline if we are not successful in adequately protecting our proprietary technologies.

Our success depends in part on our ability to obtain and maintain intellectual property that protects our technologies and our pharmaceutical products. Patent positions may be highly uncertain and may involve

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complex legal and factual questions, including the ability to establish patentability of compounds and methods for using them for which we seek patent protection. We cannot predict the breadth of claims that will ultimately be allowed in our patent applications, if any, including those we have in-licensed or the extent to which we may enforce these claims against our competitors. We have filed multiple patent applications that seek to protect the composition of matter and method of use related to our small molecule programs. In addition, we are prosecuting numerous distinct patent families directed to composition, methods of production, and methods of use of MultiStem and related technologies. If we are unsuccessful in obtaining and maintaining these patents related to products and technologies, we may ultimately be unable to commercialize products that we are developing or may elect to develop in the future.

The degree of future protection for our proprietary rights is therefore highly uncertain and we cannot assure you that:

we were the first to file patent applications or to invent the subject matter claimed in patent applications relating to the technologies or product candidates upon which we rely;

others will not independently develop similar or alternative technologies or duplicate any of our technologies;

others did not publicly disclose our claimed technology before we conceived the subject matter included in any of our patent applications;

any of our pending or future patent applications will result in issued patents;

any of our patent applications will not result in interferences or disputes with third parties regarding priority of invention;

any patents that may be issued to us, our collaborators or our licensors will provide a basis for commercially viable products or will provide us with any competitive advantages or will not be challenged by third parties;

we will develop additional proprietary technologies that are patentable;

the patents of others will not have an adverse effect on our ability to do business; or

new proprietary technologies from third parties, including existing licensors, will be available for licensing to us on reasonable commercial terms, if at all.

In addition, patent law outside the United States is uncertain and in many countries intellectual property laws are undergoing review and revision. The laws of some countries do not protect intellectual property rights to the same extent as domestic laws. It may be necessary or useful for us to participate in opposition proceedings to determine the validity of our competitors' patents or to defend the validity of any of our or our licensors' future patents, which could result in substantial costs and would divert our efforts and attention from other aspects of our business. With respect to certain of our inventions, we have decided not to pursue patent protection outside the United States, both because we do not believe it is cost effective and because of confidentiality concerns. Accordingly, our international competitors could develop and receive foreign patent protection for gene sequences and functions for which we are seeking United States patent protection, enabling them to sell products that we have developed.

Technologies licensed to us by others, or in-licensed technologies, are important to our business. The scope of our rights under our licenses may be subject to dispute by our licensors or third parties. Our rights to use these technologies and to practice the inventions claimed in the licensed patents are subject to our licensors abiding by the terms of those licenses and not terminating them. In particular, we depend on certain technologies relating to our MultiStem technology licensed from the University of Minnesota, and the termination of this license could result in

our loss of some of the rights that enable us to utilize this technology, and our ability to develop products based on MultiStem could be seriously hampered.

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In addition, we may in the future acquire rights to additional technologies by licensing such rights from existing licensors or from third parties. Such in-licenses may be costly. Also, we generally do not control the patent prosecution, maintenance or enforcement of in-licensed technologies. Accordingly, we are unable to exercise the same degree of control over this intellectual property as we do over our internally developed technologies. Moreover, some of our academic institution licensors, collaborators and scientific advisors have rights to publish data and information to which we have rights. If we cannot maintain the confidentiality of our technologies and other confidential information in connection with our collaborations, our ability to protect our proprietary information or obtain patent protection in the future may be impaired, which could have a significant adverse effect on our business, financial condition and results of operations.

We may not have adequate protection for our unpatented proprietary information, which could adversely affect our competitive position.

In addition to patents, we will substantially rely on trade secrets, know-how, continuing technological innovations and licensing opportunities to develop and maintain our competitive position. However, others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. To protect our trade secrets, we may enter into confidentiality agreements with employees, consultants and potential collaborators. However, these agreements may not provide meaningful protection of our trade secrets or adequate remedies in the event of unauthorized use or disclosure of such information. Likewise, our trade secrets or know-how may become known through other means or be independently discovered by our competitors. Any of these events could prevent us from developing or commercializing our product candidates.

Disputes concerning the infringement or misappropriation of our proprietary rights or the proprietary rights of others could be time consuming and extremely costly and could delay our research and development efforts.

Our commercial success, if any, will be significantly harmed if we infringe the patent rights of third parties or if we breach any license or other agreements that we have entered into with regard to our technology or business.

We are aware of other companies and academic institutions that have been performing research in the areas of adult derived stem cells. In particular, other companies and academic institutions have announced that they have identified nonembryonic stem cells isolated from bone marrow or other tissues that have the ability to form a range of cell types, or display the property of pluripotency. To the extent any of these companies or academic institutions currently have, or obtain in the future, broad patent claims, such patents could block our ability to use various aspects of our discovery and development process and might prevent us from developing or commercializing newly discovered applications of our MultiStem technology, or otherwise conducting our business. In addition, it is possible that some of the pharmaceutical product candidates we are developing may not be patentable or may be covered by intellectual property of third parties.

We are not currently a party to any litigation, interference, opposition, protest, reexamination or any other potentially adverse governmental, ex parte or inter-party proceeding with regard to our patent or trademark positions. However, the life sciences and other technology industries are characterized by extensive litigation regarding patents and other intellectual property rights. Many life sciences and other technology companies have employed intellectual property litigation as a way to gain a competitive advantage. If we become involved in litigation, interference proceedings, oppositions, reexamination, protest or other potentially adverse intellectual property proceedings as a result of alleged infringement by us of the rights of others or as a result of priority of invention disputes with third parties, we might have to spend significant amounts of money, time and effort defending our position and we may not be successful. In addition, any claims relating to the infringement of third-party proprietary rights or proprietary determinations, even if not meritorious, could result in costly litigation, lengthy governmental proceedings, divert management's attention and resources, or require us to enter

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into royalty or license agreements that are not advantageous to us. If we do not have the financial resources to support such litigation or appeals, we may forfeit or lose certain commercial rights. Even if we have the financial resources to continue such litigation or appeals, we may lose. In the event that we lose, we may be forced to pay very substantial damages; we may have to obtain costly license rights, which may not be available to us on acceptable terms, if at all; or we may be prohibited from selling products that are found to infringe the patent rights of others.

Should any person have filed patent applications or obtained patents that claim inventions also claimed by us, we may have to participate in an interference proceeding declared by the relevant patent regulatory agency to determine priority of invention and, thus, the right to a patent for these inventions in the United States. Such a proceeding could result in substantial cost to us even if the outcome is favorable. Even if successful on priority grounds, an interference action may result in loss of claims based on patentability grounds raised in the interference action. Litigation, interference proceedings or other proceedings could divert management's time and efforts. Even unsuccessful claims could result in significant legal fees and other expenses, diversion of management's time and disruption in our business. Uncertainties resulting from initiation and continuation of any patent proceeding or related litigation could harm our ability to compete and could have a significant adverse effect on our business, financial condition and results of operations.

An adverse ruling arising out of any intellectual property dispute, including an adverse decision as to the priority of our inventions, could undercut or invalidate our intellectual property position. An adverse ruling could also subject us to significant liability for damages, including possible treble damages, prevent us from using technologies or developing products, or require us to negotiate licenses to disputed rights from third parties. Although patent and intellectual property disputes in the technology area are often settled through licensing or similar arrangements, costs associated with these arrangements may be substantial and could include license fees and ongoing royalties. Furthermore, necessary licenses may not be available to us on satisfactory terms, if at all. Failure to obtain a license in such a case could have a significant adverse effect on our business, financial condition and results of operations.

Many potential competitors, including those who have greater resources and experience than we do, may develop products or technologies that make ours obsolete or noncompetitive.

We face significant competition with respect to our product candidates. With regard to our efforts to develop MultiStem as a novel stem cell therapy, currently, there are a number of companies that are actively developing stem cell products, which encompass a range of different cell types, including embryonic stem cells, adult-derived stem cells, and processed bone marrow derived cells. Our future success will depend on our ability to maintain a competitive position with respect to technological advances. Technological developments by others may result in our MultiStem product platform and technologies, as well as our pharmaceutical formulations, becoming obsolete.

We are subject to significant competition from pharmaceutical, biotechnology and diagnostic companies, academic and research institutions, and government or other publicly funded agencies that are pursuing or may pursue the development of therapeutic products and technologies that are substantially similar to our proposed therapeutic products and technologies, or that otherwise address the indications we are pursuing. Our most significant competitors include major pharmaceutical companies such as Pfizer, F. Hoffmann-La Roche, Ltd., or Roche, Johnson & Johnson, Sanofi and GlaxoSmithKline plc, or GlaxoSmithKline, as well as smaller biotechnology or biopharmaceutical companies such as Celgene Corporation, or Celgene, Osiris Therapeutics, Inc., or Osiris, Aastrom Biosciences, Inc., or Aastrom Biosciences, Stem Cells Inc., Cytori Therapeutics, Inc., or Cytori, Mesoblast, Pluristem, Arena Pharmaceuticals, Inc., Orexigen Therapeutics, Inc. and Vivus, Inc., or Vivus. Most of our current and potential competitors have substantially greater research and development capabilities and financial, scientific, regulatory, manufacturing, marketing, sales, human resources, and experience than we do. Many of our competitors have several therapeutic products that have already been developed, approved and

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successfully commercialized, or are in the process of obtaining regulatory approval for their therapeutic products in the United States and internationally.

Many of these companies have substantially greater capital resources, research and development resources and experience, manufacturing capabilities, regulatory expertise, sales and marketing resources, established relationships with consumer products companies and production facilities.

Universities and public and private research institutions are also potential competitors. While these organizations primarily have educational objectives, they may develop proprietary technologies related to stem cells or secure patent protection that we may need for the development of our technologies and products. We may attempt to license these proprietary technologies, but these licenses may not be available to us on acceptable terms, if at all. Our competitors, either alone or with their collaborative partners, may succeed in developing technologies or products that are more effective, safer, more affordable or more easily commercialized than ours, and our competitors may obtain intellectual property protection or commercialize products sooner than we do. Developments by others may render our product candidates or our technologies obsolete.

Our current product discovery and development collaborators are not prohibited from entering into research and development collaboration agreements with third parties in any product field. Our failure to compete effectively would have a significant adverse effect on our business, financial condition and results of operations.

We will use hazardous and biological materials in our business. Any claims relating to improper handling, storage or disposal of these materials could be time consuming and costly.

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

If we acquire products, technologies or other businesses, we will incur a variety of costs, may have integration difficulties and may experience numerous other risks that could adversely affect our business.

To remain competitive, we may decide to acquire additional businesses, products and technologies. We currently have no commitments or agreements with respect to, and are not actively seeking, any material acquisitions. We have limited experience in identifying acquisition targets, successfully acquiring them and integrating them into our current infrastructure. We may not be able to successfully integrate any businesses, products, technologies or personnel that we might acquire in the future without a significant expenditure of operating, financial and management resources, if at all. In addition, future acquisitions could require significant capital infusions and could involve many risks, including, but not limited to the following:

we may have to issue convertible debt or equity securities to complete an acquisition, which would dilute our stockholders and could adversely affect the market price of our common stock;

an acquisition may negatively impact our results of operations because it may require us to incur large one-time charges to earnings, amortize or write down amounts related to goodwill and other intangible assets, or incur or assume substantial debt or liabilities, or it may cause adverse tax consequences, substantial depreciation or deferred compensation charges;

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we may encounter difficulties in assimilating and integrating the business, technologies, products, personnel or operations of companies that we acquire;

certain acquisitions may disrupt our relationship with existing collaborators who are competitive to the acquired business;

acquisitions may require significant capital infusions and the acquired businesses, products or technologies may not generate sufficient revenue to offset acquisition costs;

an acquisition may disrupt our ongoing business, divert resources, increase our expenses and distract our management;

acquisitions may involve the entry into a geographic or business market in which we have little or no prior experience; and

key personnel of an acquired company may decide not to work for us.

Any of the foregoing risks could have a significant adverse effect on our business, financial condition and results of operations.

To the extent we enter markets outside of the United States, our business will be subject to political, economic, legal and social risks in those markets, which could adversely affect our business.

There are significant regulatory and legal barriers in markets outside the United States that we must overcome to the extent we enter or attempt to enter markets in countries other than the United States. We will be subject to the burden of complying with a wide variety of national and local laws, including multiple and possibly overlapping and conflicting laws. We also may experience difficulties adapting to new cultures, business customs and legal systems. Any sales and operations outside the United States would be subject to political, economic and social uncertainties including, among others:

changes and limits in import and export controls;

increases in custom duties and tariffs;

changes in currency exchange rates;

economic and political instability;

changes in government regulations and laws;

absence in some jurisdictions of effective laws to protect our intellectual property rights; and

currency transfer and other restrictions and regulations that may limit our ability to sell certain products or repatriate profits to the United States.

Any changes related to these and other factors could adversely affect our business to the extent we enter markets outside the United States.

Foreign governments often impose strict price controls on approved products, which may adversely affect our future profitability in those countries, and the re-importation of drugs to the United States from foreign countries that impose price controls may adversely affect our future profitability.

Frequently foreign governments impose strict price controls on newly approved therapeutic products. If we obtain regulatory approval to sell products in foreign countries, we may be unable to obtain a price that provides an adequate financial return on our investment. Furthermore, legislation in the United States may permit re-importation of drugs from foreign countries into the United States, including re-importation from foreign countries where the drugs are sold at lower prices than in the United States due to foreign government-mandated

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price controls. Such a practice, especially if it is conducted on a widespread basis, may significantly reduce our potential United States revenues from any drugs that we are able to develop.

If we elect not to sell our products in foreign countries that impose government mandated price controls because we decide it is uneconomical to do so, a foreign government or patent office may attempt to terminate our intellectual property rights in that country, enabling competitors to make and sell our products.

In some cases we may choose not to sell a product in a foreign country because it is uneconomical to do so under a system of government-imposed price controls, or because it could severely limit our profitability in the United States or other markets. In such cases, a foreign government or patent office may terminate any intellectual property rights we may obtain with respect to that product. Such a termination could enable competitors to produce and sell our product in that market. Furthermore, such products may be exported into the United States through legislation that authorizes the importation of drugs from outside the United States. In such an event, we may have to reduce our prices, or we may be unable to compete with low-cost providers of our drugs, and we could be financially harmed as a result.

We may encounter difficulties managing our growth, which could adversely affect our business.

At various times we have experienced periods of rapid growth in our employee numbers as a result of a dramatic increase in activity in technology programs, genomics programs, collaborative research programs, discovery programs, and scope of operations. At other times, we have had to reduce staff in order to bring our expenses in line with our financial resources. Our success will also depend on the ability of our officers and key employees to continue to improve our operational capabilities and our management information and financial control systems, and to expand, train and manage our work force.

We may be sued for product liability, which could adversely affect our business.

Because our business strategy involves the development and sale by either us or our collaborators of commercial products, we may be sued for product liability. We may be held liable if any product we develop and commercialize, or any product our collaborators commercialize that incorporates any of our technology, causes injury or is found otherwise unsuitable during product testing, manufacturing, marketing, sale or consumer use. In addition, the safety studies we must perform and the regulatory approvals required to commercialize our pharmaceutical products, will not protect us from any such liability.

We carry product liability insurance that includes coverage for human clinical trials. Currently, we carry a \$5 million per event, \$5 million annual aggregate coverage for both our products liability policy and our clinical trials protection. We also intend to seek product liability insurance for any approved products that we may develop or acquire. However, in the event there are product liability claims against us, our insurance may be insufficient to cover the expense of defending against such claims, or may be insufficient to pay or settle such claims. Furthermore, we may be unable to obtain adequate product liability insurance coverage for commercial sales of any of our approved products. If such insurance is insufficient to protect us, our results of operations will suffer. If any product liability claim is made against us, our reputation and future sales will be damaged, even if we have adequate insurance coverage.

The availability, manner, and amount of reimbursement for our product candidates from government and private payers are uncertain, and our inability to obtain adequate reimbursement for any products could severely limit our product sales.

We expect that many of the patients who seek treatment with any of our products that are approved for marketing will be eligible for Medicare benefits. Other patients may be covered by private health plans. If we are unable to obtain or retain adequate levels of reimbursement from Medicare or from private health plans, our

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ability to sell our products will be severely limited. The application of existing Medicare regulations and interpretive coverage and payment determinations to newly approved products is uncertain and those regulations and interpretive determinations are subject to change. The Medicare Prescription Drug Improvement and Modernization Act, enacted in December 2003, provides for a change in reimbursement methodology that reduces the Medicare reimbursement rates for many drugs, which may adversely affect reimbursement for any products we may develop. Medicare regulations and interpretive determinations also may determine who may be reimbursed for certain services, and may limit the pool of patients our product candidates are being developed to serve.

Federal, state and foreign governments continue to propose legislation designed to contain or reduce health care costs. Legislation and regulations affecting the pricing of products like our potential products may change further or be adopted before any of our potential products are approved for marketing. Cost control initiatives by governments or third-party payers could decrease the price that we receive for any one or all of our potential products or increase patient coinsurance to a level that make our products under development become unaffordable. In addition, government and private health plans persistently challenge the price and cost-effectiveness of therapeutic products. Accordingly, these third parties may ultimately not consider any or all of our products under development to be cost effective, which could result in products not being covered under their health plans or covered only at a lower price. Any of these initiatives or developments could prevent us from successfully marketing and selling any of our products that are approved for commercialization.

Public perception of ethical and social issues surrounding the use of adult-derived stem cell technology may limit or discourage the use of our technologies, which may reduce the demand for our therapeutic products and technologies and reduce our revenues.

Our success will depend in part upon our ability to develop therapeutic products incorporating or discovered through our adult-derived stem cell technology. For social, ethical, or other reasons, governmental authorities in the United States and other countries may call for limits on, or regulation of the use of, adult-derived stem cell technologies. Although we do not use the more controversial stem cells derived from embryos or fetuses, claims that adult-derived stem cell technologies are ineffective, unethical or pose a danger to the environment may influence public attitudes. The subject of stem cell technologies in general has received negative publicity and aroused public debate in the United States and some other countries. Ethical and other concerns about our adult-derived stem cell technology could materially hurt the market acceptance of our therapeutic products and technologies, resulting in diminished sales and use of any products we are able to develop using adult-derived stem cells.

Risks Related to this Offering and our Common Stock

The sale of our common stock to Aspire Capital may cause substantial dilution to our existing stockholders and the sale of the shares of common stock acquired by Aspire Capital could cause the price of our common stock to decline.

We are registering for sale the Commitment Shares that we have issued, the Initial Purchase Shares previously sold to Aspire Capital and an additional 7,066,666 shares that we may sell to Aspire Capital under the Purchase Agreement. It is anticipated that shares registered in this offering will be sold by Aspire Capital over a period of up to approximately 24 months from the date of this prospectus. The number of shares of common stock that we may sell under the Purchase Agreement may exceed 8,000,000 shares, depending on the sales price, which can be no less than the Floor Price. If we elect to sell more than the 8,000,000 shares of common stock offered hereby, we must first register under the Securities Act the sale by Aspire Capital of any additional shares we may elect to sell to Aspire Capital before we can put such additional shares to Aspire Capital under the Purchase Agreement. Additionally, the number of shares ultimately offered for sale by Aspire Capital under this prospectus is dependent upon the number of shares we elect to sell to Aspire Capital under the Purchase

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Agreement. Depending upon market liquidity at the time, sales of shares of our common stock under the Purchase Agreement may cause the trading price of our common stock to decline.

In addition to the Initial Purchase Shares, Aspire Capital may ultimately purchase all, some or none of the remaining \$19.0 million of common stock that, together with the Commitment Shares, is the subject of this prospectus. Aspire Capital may sell all, some or none of our shares that it holds or comes to hold under the Purchase Agreement. Sales by Aspire Capital of shares acquired pursuant to the Purchase Agreement under the registration statement, of which this prospectus is a part, may result in dilution to the interests of other holders of our common stock. The sale of a substantial number of shares of our common stock by Aspire Capital in this offering, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales. However, we have the right to control the timing and amount of sales of our shares to Aspire Capital, and the Purchase Agreement may be terminated by us at any time at our discretion without any penalty or cost to us.

If we do not continue to meet the listing standards established by The NASDAQ Capital Market, the common stock may not remain listed for trading.

The NASDAQ Capital Market has established certain quantitative criteria and qualitative standards that companies must meet in order to remain listed for trading on these markets. We cannot guarantee that we will be able to maintain all necessary requirements for listing; therefore, we cannot guarantee that our common stock will remain listed for trading on The NASDAQ Capital Market or other similar markets.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled Prospectus Summary, Risk Factors, Management's Discussion and Analysis of Financial Condition and Results of Operations and Business, contains forward-looking statements that represent our beliefs, projections and predictions about future events or our future performance. You can identify forward-looking statements by terminology such as may, will, would, could, should, expect, intend, plan, anticipate, believe, estimate, predict, potential, continue or the negative of these terms or other similar words or phrases. These forward-looking statements are necessarily subjective and involve known and unknown risks, uncertainties and other important factors that could cause our actual results, performance or achievements or industry results to differ materially from any future results, performance or achievement described in or implied by such statements.

Factors that may cause actual results to differ materially from expected results described in forward-looking statements include, but are not limited to:

uncertainty regarding market acceptance of our product candidates and our ability to generate revenues, including MultiStem for the treatment of IBD, acute myocardial infarction, or AMI, stroke and other disease indications, and the prevention of graft-versus-host disease, or GvHD;

our ability to raise capital to fund our operations;

final results from our MultiStem clinical trials;

the possibility of delays in, adverse results of and excessive costs of the development process;

our ability to successfully initiate and complete clinical trials;

changes in external market factors;

changes in our industry's overall performance;

changes in our business strategy;

our ability to protect our intellectual property portfolio;

our possible inability to realize commercially valuable discoveries in our collaborations with pharmaceutical and other biotechnology companies;

our ability to meet milestones under our collaboration agreements;

our collaborators' ability to continue to fulfill their obligations under the terms of our collaboration agreement;

our possible inability to execute our strategy due to changes in our industry or the economy generally;

changes in productivity and reliability of suppliers; and

the success of our competitors and the emergence of new competitors.

See **Risk Factors** for a more complete discussion of these risks and uncertainties and for other risks and uncertainties. Any forward-looking statement you read in this prospectus reflects our current views with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our operations, operating results, growth strategy and liquidity. You should not place undue reliance on these forward-looking statements because such statements speak only as to the date when made. We assume no obligation to publicly update or revise these forward-looking statements for any reason, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future, except as otherwise required by applicable law.

This prospectus also contains statistical data and estimates we obtained from industry publications and reports generated by third parties. Although we believe that the publications and reports are reliable, we have not independently verified their data.

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USE OF PROCEEDS

The selling stockholder will receive all of the proceeds from the sale of the shares offered for sale by it under this prospectus. We will not receive proceeds from the sale of the shares by the selling stockholder. However, we may receive up to an additional \$19.0 million in proceeds from the sale of our common stock to the selling stockholder under the Purchase Agreement, for a total of \$20.0 million in proceeds. We will bear all reasonable expenses incident to the registration of the shares of our common stock under federal and state securities laws other than expenses incident to the delivery of the shares to be sold by Aspire Capital. Any transfer taxes payable on these shares and any commissions and discounts payable to underwriters, agents, brokers or dealers will be paid by Aspire Capital.

Assuming the sale by us of all of an additional \$19.0 million of shares of our common stock to Aspire Capital and estimated expenses of \$0.2 million, the total net proceeds to us, giving effect to our initial sale of \$1.0 million of common stock to Aspire Capital, would be \$19.8 million, which we currently intend to use for working capital and general corporate purposes.

This anticipated use of net proceeds from the sale of our common stock to Aspire Capital under the Purchase Agreement represents our intentions based upon our current plans and business conditions. As a result, our management will retain broad discretion over the allocation of the net proceeds from the sale of our common stock to Aspire Capital under the Purchase Agreement.

Table of Contents**COMMON STOCK PRICE RANGE**

Our common stock is listed on The NASDAQ Capital Market under the symbol ATHX. The following table sets forth, for the periods indicated, the high and low sales prices for our common stock as reported on The NASDAQ Capital Market.

	High	Low
Year ending December 31, 2011		
Fourth Quarter (through December 8, 2011)	\$ 2.42	\$ 1.13
Third Quarter	\$ 2.86	\$ 1.00
Second Quarter	\$ 3.10	\$ 2.50
First Quarter	\$ 3.08	\$ 2.35
Year ended December 31, 2010		
Fourth Quarter	\$ 3.19	\$ 2.42
Third Quarter	\$ 3.55	\$ 2.34
Second Quarter	\$ 3.63	\$ 2.56
First Quarter	\$ 4.40	\$ 2.32
Year ended December 31, 2009		
Fourth Quarter	\$ 6.40	\$.97
Third Quarter	\$ 1.35	\$.78
Second Quarter	\$ 1.04	\$.75
First Quarter	\$ 1.28	\$.45

The last reported sales price for our common stock on December 8, 2011 is set forth on the cover page of this prospectus. As of November 30, 2011, there were approximately 658 holders of record of our common stock.

DIVIDEND POLICY

We would have to rely upon dividends and other payments from our wholly-owned subsidiary, ABT Holding Company, to generate the funds necessary to make dividend payments, if any, on our common stock. ABT Holding Company, however, is legally distinct from us and has no obligation to pay amounts to us. The ability of ABT Holding Company to make dividend and other payments to us is subject to, among other things, the availability of funds and applicable state laws. However, there are no restrictions such as government regulations or material contractual arrangements that restrict the ability of ABT Holding Company to make dividend and other payments to us. We did not pay cash dividends on our common stock during the past two years or for the nine months ended September 30, 2011. We do not anticipate that we will pay any dividends on our common stock in the foreseeable future. Rather, we anticipate that we will retain earnings, if any, for use in the development of our business.

Table of Contents**DILUTION**

If you acquire shares of our common stock from the selling stockholder in this offering, your ownership interest will be diluted to the extent of the difference between the public offering price per share of our common stock and the pro forma net tangible book value per share of our common stock after this offering. Our historical net tangible book value of common stock as of September 30, 2011 was \$10.6 million, or \$0.45 per share of common stock. Historical net tangible book value per share represents the amount of our total tangible assets less total liabilities, divided by the total number of shares of common stock outstanding.

After giving effect to (i) the issuance of the 266,667 Commitment Shares, (ii) the sale of the 666,667 Initial Purchase Shares, at a price of \$1.50 per share for an aggregate amount of \$1.0 million, (iii) the issuance of 50,000 shares of common stock to our former lenders and (iv) the sale of an additional 7,066,666 shares of common stock at \$1.45 per share, and after deducting estimated offering expenses payable by us, our pro forma net tangible book value as of September 30, 2011 would have been \$21.6 million, or \$0.68 per share of common stock. This represents an immediate increase in pro forma net tangible book value of \$0.23 per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of \$0.77 per share to investors participating in this offering. The following table illustrates this per share dilution:

Assumed public offering price per share	\$ 1.45
Historical net tangible book value per share as of September 30, 2011	\$ 0.45
Increase in net tangible book value per share attributable to this offering	0.23
Pro forma net tangible book value per share after this offering	0.68
Dilution per share to investors participating in this offering	\$ 0.77

The shares sold in this offering, if any, in addition to the Commitment Shares and the Initial Purchase Shares may be sold from time to time at various prices.

Each \$0.25 increase in the per share price at which we sell shares to Aspire Capital under the Purchase Agreement from the assumed offering price of \$1.45 per share would increase our pro forma net tangible book value by \$1.7 million, our pro forma net tangible book value per share by \$0.05 and dilution per share to new investors purchasing shares of common stock in this offering by \$0.20, assuming that the number of shares of common stock offered, as set forth on the cover page of this prospectus, remains the same and after deducting estimated aggregate offering expenses payable by us. This information is supplied for illustrative purposes only.

The table and calculations set forth above are based on the number of shares of common stock outstanding as of September 30, 2011 and assumes no exercise of any outstanding options or warrants. To the extent that options or warrants are exercised, there will be further dilution to new investors.

The above information excludes:

4,537,826 shares of common stock authorized and reserved for future issuance under outstanding awards under our equity incentive plans;

962,174 shares of common stock authorized and reserved for future issuance under our equity incentive plans;

1,075 shares of common stock issuable upon exercise of additional outstanding stock options;

6,435,496 shares of common stock issuable upon exercise of outstanding warrants; and

any additional milestone payments to our former lenders, whether in the form of cash or shares of common stock.

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The selected consolidated financial data set forth below should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations and the consolidated financial statements and the notes thereto included elsewhere in this prospectus.

	2006	2007	Year Ended December 31,		2010	Nine Months Ended September 30,	
			2008	2009		2010	2011
(in thousands, except share and per share data)							
Consolidated Statement of Operations Data:							
Revenues:							
Contract revenue	\$ 1,908	\$ 1,433	\$ 1,880	\$ 1,079	\$ 6,685	\$ 4,515	\$ 6,712
Grant revenue	1,817	1,827	1,225	1,080	2,254	1,092	1,067
Total revenues	3,725	3,260	3,105	2,159	8,939	5,607	7,779
Costs and expenses:							
Research and development	9,741	15,817	16,500	11,920	14,779	10,569	13,360
General and administrative	3,347	7,975	5,479	5,621	5,387	4,249	3,721
Depreciation	528	283	218	233	284	216	202
Loss from operations	(9,891)	(20,815)	(19,092)	(15,615)	(11,511)	(9,427)	(9,504)
Other (expense) income:							
Other income (expense), net	208	2,017	48	(126)	(69)	(64)	(65)
Interest income	119	1,591	1,146	375	203	165	75
Interest expense	(1,047)	(1,263)	(94)				
Accretion of premium on convertible debt	(260)	(456)					
Loss before cumulative effect of change in accounting principle	(10,871)	(18,926)	(17,992)	(15,366)	(11,377)	(9,326)	(9,494)
Cumulative effect of change in accounting principle	306						
Net loss	\$ (10,565)	\$ (18,926)	\$ (17,992)	\$ (15,366)	\$ (11,377)	\$ (9,326)	\$ (9,494)
Preferred stock dividends	(1,408)	(659)					
Deemed dividend resulting from induced conversion of convertible preferred stock		(4,800)					
Net loss attributable to common stockholders	\$ (11,973)	\$ (24,385)	\$ (17,992)	\$ (15,366)	\$ (11,377)	\$ (9,326)	\$ (9,494)
Basic and diluted net loss per common share attributable to common stockholders:							
Loss before cumulative effect of change in accounting principle	\$ (41.89)	\$ (2.26)	\$ (0.95)	\$ (0.81)	\$ (0.60)	\$ (0.49)	\$ (0.41)
Cumulative effect of change in accounting principle	1.05						
Net loss per share	\$ (40.84)	\$ (2.26)	\$ (0.95)	\$ (0.81)	\$ (0.60)	\$ (0.49)	\$ (0.41)
Weighted average shares outstanding, basic and diluted	293,142	10,811,119	18,927,988	18,928,379	18,929,749	18,929,436	22,966,047

	2006	2007	December 31, 2008	2009	2010	September 30, 2010	2011
Consolidated Balance Sheet Data:							
Cash and cash equivalents	\$ 1,528	\$ 13,248	\$ 12,552	\$ 11,167	\$ 2,105	\$ 2,210	\$ 8,539
Available-for-sale securities, short-term		22,477	15,460	10,135	13,076	13,615	8,003
Working capital (deficit)	(3,206)	32,849	26,789	16,291	9,106	9,871	10,333
Available-for-sale securities, long-term		13,850	3,601	5,080		2,015	
Total assets	4,266	52,225	33,877	28,331	19,106	22,181	18,861
Long-term obligations, less current portion	9,310						
Warrant liability							1,100
Accrued dividends	8,882						
Total stockholders' equity (deficit)	(20,007)	47,631	31,563	18,957	9,005	10,857	10,579

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

The following discussion and analysis should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this prospectus. The following discussion and analysis contains forward-looking statements that reflect our plans, estimates and beliefs and involves risks and uncertainties. Our actual results could differ materially from those discussed in these forward-looking statements as a result of various factors, including those discussed below, under the headings "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements" and in other parts of this prospectus.

Overview and Recent Developments

We are an international biopharmaceutical company that is focused in the field of regenerative medicine. We have established a portfolio of therapeutic product development programs to address significant unmet medical needs in multiple areas. Our current clinical development programs are focused on treating cardiovascular disease, neurological conditions, inflammatory & immune disorders, and other conditions. We are developing our lead platform product, MultiStem, a patented and proprietary allogeneic stem cell product that has been evaluated in two fully-enrolled Phase I clinical trials and is currently being evaluated in ongoing Phase II clinical trials. We are also applying our pharmaceutical discovery capabilities to identify and develop small molecule compounds with potential applications in indications such as obesity, related metabolic conditions and certain neurological conditions, and for the modulation of stem cells or related applications in the regenerative medicine area.

Current Programs

By applying our proprietary MultiStem cell therapy product platform, we have established therapeutic product development programs in the areas of treating cardiovascular disease, neurological disease, and inflammatory & immune disorders. To date, we have advanced four programs to the clinical development stage:

Inflammatory Bowel Disease: MultiStem is being evaluated in an ongoing Phase II clinical study involving administration of MultiStem to patients suffering from ulcerative colitis, the most common form of IBD. This study was authorized by the FDA in November 2010 and is being conducted with our partner, Pfizer. This trial began enrolling patients in the study in February 2011 and is expected to enroll approximately 130 patients. Enrollment of this trial is expected to be completed in 2012.

Ischemic Stroke: We recently initiated a Phase II clinical study to evaluate the administration of MultiStem to patients that have suffered an ischemic stroke, an area of significant unmet clinical need. In preclinical studies, administration of a single dose of MultiStem, even several days after a stroke, resulted in significant and durable improvements. We will evaluate the potential clinical benefits of MultiStem in this ongoing double blind, placebo controlled trial being conducted at leading stroke centers across the United States. The study is expected to include approximately 140 patients, and patient enrollment was initiated in the fall of 2011.

Acute Myocardial Infarction: We have evaluated the administration of MultiStem to patients that have suffered an AMI, more commonly referred to as a heart attack in a Phase I clinical study. In July 2010, we announced interim results for this study, demonstrating a consistent safety profile and encouraging signs of improvement in heart function among patients that exhibited severely compromised heart function prior to treatment and who received treatment after experiencing a heart attack. One year follow-up data suggested that the benefit observed was sustained over time. We are currently preparing for a Phase II study. In light of the recent termination of our license and collaboration agreement with Angiotech Pharmaceuticals, Inc., or Angiotech, we expect to review the study design, objectives and expected timelines to streamline the study where possible and to ensure optimal alignment with our ongoing clinical development, business development and financial objectives. This is expected to delay our Phase II study initiation into 2012.

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Hematopoietic Stem Cell Transplant / GvHD: We are engaged in a clinical study of the administration of MultiStem to patients suffering from leukemia or certain other blood-borne cancers in which patients undergo radiation therapy and then receive a hematopoietic stem cell, or HSC, transplant. Such patients are at risk for serious complications, including GvHD, an imbalance of immune system function caused by transplanted immune cells that attack various tissues and organs in the patient. In May 2011, we released preliminary data from the single dose arm of the study, which demonstrated the safety of MultiStem in this indication and suggested that MultiStem may have a beneficial effect in reducing incidence and severity of GvHD. We recently completed enrollment of the repeat dose arm and expect to release additional data by early 2012.

In addition to our current and anticipated clinical development activities, we are engaged in preclinical development and evaluation of MultiStem in other disease indications in the cardiovascular, neurological, inflammatory & immune disorder areas. We conduct such work both through our own internal research efforts, and through a broad network of collaborations we have established with investigators at leading research institutions across the United States and in Europe.

We are also working with our collaborator, RTI, to develop products for certain orthopedic applications in the bone graft substitutes market using our stem cell technologies.

We are also engaged in the development of novel small molecule therapies to treat obesity and other conditions. Currently, we are focused on the development of potent, highly selective compounds that act through stimulation of a specific receptor in the brain, the 5HT2c serotonin receptor. We are conducting preclinical evaluation of novel compounds that we have developed that exhibit outstanding receptor selectivity and are working towards the selection of a clinical development candidate for this program.

Financial

We have incurred losses since inception of operations in 1995 and had an accumulated deficit of \$215 million at September 30, 2011. Our losses have resulted principally from costs incurred in research and development, clinical and preclinical product development, acquisition and licensing costs, and general and administrative costs associated with our operations. We have used the financing proceeds from private equity and debt offerings and other sources of capital to develop our technologies, to discover and develop therapeutic product candidates, develop business collaborations and to acquire certain technologies and assets.

In February 2011, we completed a registered direct offering of 4,366,667 shares of common stock and five-year warrants to purchase 1,310,000 shares of common stock with an exercise price of \$3.55 per share, generating net proceeds of \$11.8 million. The securities were sold in multiples of a fixed combination of one share of common stock and a warrant to purchase 0.3 of a share of common stock at an offering price of \$3.00 per fixed combination.

As of September 30, 2011, we had approximately \$16.5 million of cash, cash equivalents and investments available to fund continued operations, after expending approximately \$10.0 million to fund operations over the last nine months and reflecting the fundraising activity earlier in the year. To fund our continued operations and create shareholder value through the advancement of clinical programs and otherwise, we intend to enter into additional development partnerships, secure additional grant funding, and take advantage of complementary traditional and alternative fundraising approaches.

During 2011, we were awarded grants aggregating approximately \$800,000 for projects spanning over the next few years, including our alliance with Fast Forward, LLC, described herein. The sources of funding including federal, state, European and private organizations and are generally aimed at the advancement of our preclinical MultiStem programs and MultiStem process development.

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In November 2011, we entered into the Purchase Agreement, which provides that Aspire Capital is committed to purchase up to an aggregate of \$20.0 million of shares of our common stock through an equity purchase agreement over a two-year term, subject to our election to sell any such shares, and the terms and conditions set forth therein. Under the agreement, we have the right to sell shares, subject to certain volume limitations and a minimum floor price, at a modest discount to the prevailing market price. As part of the agreement, Aspire Capital made an initial investment of \$1.0 million in us through the purchase of 666,667 shares of our common stock at \$1.50 per share, and received 266,667 additional shares as compensation for its commitment. In connection with this initial investment, our former lenders were entitled to a milestone payment in the amount of \$100,000, of which \$25,000 was paid in cash and \$75,000 was paid through the issuance of our common stock to the former lenders at our election at \$1.50 per share in November 2011.

Results of Operations

Since our inception, our revenues have consisted of contract revenues and milestone payments from our collaborators, and grant proceeds primarily from federal and state grants. We have derived no revenue from therapeutic products to date. Research and development expenses consist primarily of external clinical and preclinical study fees, manufacturing costs, salaries and related personnel costs, legal expenses resulting from intellectual property prosecution processes, facility costs, and laboratory supply and reagent costs. We expense research and development costs as they are incurred. We expect to continue to make significant investments in research and development to enhance our technologies, advance clinical trials of our product candidates, expand our regulatory affairs and product development capabilities, conduct preclinical studies of our product and manufacture our product candidates. General and administrative expenses consist primarily of salaries and related personnel costs, professional fees and other corporate expenses. We expect to continue to incur substantial losses through at least the next several years.

The following tables set forth our revenues and expenses for the periods indicated. The following tables are stated in thousands.

Revenues

	Year Ended December 31,			Nine Months Ended September 30,	
	2008	2009	2010	2010	2011
Contract revenue	\$ 1,880	\$ 1,079	\$ 6,685	\$ 4,515	\$ 6,712
Grant revenue	1,225	1,080	2,254	1,092	1,067