

ATHERSYS, INC / NEW
Form POS AM
January 28, 2015
Table of Contents

As filed with the Securities and Exchange Commission on January 28, 2015

Registration No. 333-185991

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

POST-EFFECTIVE AMENDMENT NO. 1

TO

FORM S-3

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

ATHERSYS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

20-4864095
(I.R.S. Employer
Identification Number)

3201 Carnegie Avenue

Cleveland, Ohio 44115-2634

(216) 431-9900

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Dr. Gil Van Bokkelen

Chief Executive Officer

Athersys, Inc.

3201 Carnegie Avenue

Cleveland, Ohio 44115-2634

(216) 431-9900

(Address, including zip code, and telephone number, including area code, of agent for service)

Copies To:

Christopher M. Kelly

Michael J. Solecki

Jones Day

901 Lakeside Avenue

Cleveland, Ohio 44114

Phone: (216) 586-3939

Fax: (216) 579-0212

Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

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, other than securities offered only in connection with dividend or interest reinvestment plans, please check the following box.

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

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

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this form is a post-effective amendment to a registration statement pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

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.

Table of Contents

EXPLANATORY NOTE

This Registration Statement is a post-effective amendment to a Registration Statement on Form S-3 (Registration Statement No. 333-185991) (the ***Original Registration Statement***), which was declared effective by the Securities and Exchange Commission (the ***Commission***) on January 22, 2013. Pursuant to the Original Registration Statement, the Registrant previously registered and sold (i) 10,000,000 shares of its common stock and warrants to purchase 3,500,000 share of its common stock (the ***2013 Warrants***) by means of a prospectus supplement dated November 27, 2013 (the ***2013 Prospectus Supplement***) and (ii) 5,000,000 shares of its common stock and warrants to purchase 1,500,000 shares of its common stock by means of a prospectus supplement dated January 10, 2014. This Registration Statement is being filed to supplement the 2013 Prospectus Supplement in connection with the Registrant's modification of the 2013 Warrants to register the shares of common stock issuable upon exercise of the modified 2013 Warrants.

Table of Contents

The information in this prospectus is not complete and may be changed. We 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 it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PROSPECTUS SUPPLEMENT

(To Prospectus dated January 22, 2013 and

Prospectus Supplement dated November 27, 2013)

Subject to Completion, Dated January 28, 2015

Shares of Common Stock Issuable Pursuant to Outstanding Warrants

This document supplements the prospectus, dated January 22, 2013, as supplemented by the prospectus supplement dated November 27, 2013.

On December 3, 2013, we sold (i) warrants to purchase up to 2,098,782 shares of our common stock, which were immediately exercisable at any time and from time to time (the Series A Warrants) at an exercise price of \$2.50 per share, and (ii) warrants to purchase up to 1,401,218 shares of common stock, which were exercisable at any time and from time to time after six months from the date of closing (the Series B Warrants, and together with the Series A Warrants, the Warrants) at an exercise price of \$2.50 per share. The Warrants were exercisable until March 31, 2015.

On January 28, 2015, we and the holders of the Warrants exercisable for 3,500,000 shares of common stock amended such Warrants to extend the expiration date to May 31, 2015 and the exercise price to \$2.75 per share. Except as disclosed herein, the terms of the Warrants remain unchanged.

Our common stock is listed on the NASDAQ Capital Market under the symbol ATHX. The last reported sale price of our common stock on the NASDAQ Capital Market on January 27, 2015 was \$2.27 per share.

Investing in our securities involves significant risk. Please read carefully the section entitled Risk Factors beginning on page 3 of the prospectus dated January 22, 2013 and page S-4 of the prospectus supplement dated November 27, 2013.

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

The date of this prospectus supplement is _____, 2015

Table of Contents**PROSPECTUS SUPPLEMENT****(To Prospectus dated January 22, 2013)**

**10,000,000 Shares of Common Stock and
Warrants to Purchase 3,500,000 Shares of Common Stock**

Pursuant to this prospectus supplement and the accompanying prospectus, we are offering 10,000,000 shares of our common stock, par value \$0.001 per share, and warrants to purchase up to an additional 3,500,000 shares of our common stock. The shares and warrants will be sold in multiples of a fixed combination consisting of (i) one share of common stock, (ii) one immediately exercisable warrant to purchase approximately 0.21 shares of common stock and (iii) one warrant exercisable six months from the date of closing to purchase approximately 0.14 shares of common stock. The warrants will have an initial exercise price of \$2.50 per share. The warrants will be exercisable until March 31, 2015. The shares of common stock and the warrants will be issued separately but can only be purchased together in this offering. Each fixed combination will be sold to investors at a price of \$2.00. We refer to the shares of common stock issued or issuable hereunder upon exercise of the warrants and the warrants collectively as the securities. This prospectus supplement also relates to the offering of the shares of common stock issuable upon the exercise of the warrants issued in this offering.

Our common stock is listed on the NASDAQ Capital Market under the symbol ATHX. The last reported sale price of our common stock on the NASDAQ Capital Market on November 26, 2013 was \$2.06 per share.

We have retained Maxim Group LLC to act as our lead placement agent for this offering. Maxim Group LLC has retained First Analysis Securities Corporation to act as co-placement agent in connection with this offering. We have agreed to pay the placement agents the placement agent fee set forth in the table below, which assumes that we sell all of the securities we are offering. The placement agents are not required to arrange for the sale of any specific number of securities or dollar amount but will use reasonable best efforts to arrange for the sale of the securities.

Investing in our securities involves significant risk. Please read carefully the section entitled Risk Factors beginning on page S-4 of this prospectus supplement.

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

	Per Fixed Combination	Maximum Offering Amount
Offering Price	\$ 2.00	\$ 20,000,000

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Placement Agent Fee	\$	0.12	\$	1,200,000
Proceeds to Us, Before Expenses	\$	1.88	\$	18,800,000

We estimate the total expenses of this offering, excluding the placement agent fee, will be approximately \$350,000. Because there is no minimum offering amount required as a condition to closing in this offering, the actual offering amount and net proceeds to us, if any, in this offering may be substantially less than the total maximum offering amounts set forth above. It is anticipated that the shares of common stock and the warrants will be delivered against payment thereon on or before December 3, 2013.

Lead Placement Agent

Maxim Group LLC

Co-Placement Agent

First Analysis Securities Corporation

Prospectus supplement dated November 27, 2013

Table of Contents

TABLE OF CONTENTS

Prospectus Supplement

	Page
<u>About This Prospectus Supplement</u>	S-ii
<u>Where You Can Find More Information</u>	S-iii
<u>Information We Incorporate By Reference</u>	S-iii
<u>Disclosure Regarding Forward-Looking Statements</u>	S-iv
<u>Prospectus Supplement Summary</u>	S-1
<u>Risk Factors</u>	S-4
<u>Use of Proceeds</u>	S-5
<u>Dilution</u>	S-6
<u>Capitalization</u>	S-7
<u>Common Stock Price Range</u>	S-8
<u>Description of Securities We Are Offering</u>	S-9
<u>Plan of Distribution</u>	S-11
<u>Legal Matters</u>	S-14
<u>Experts</u>	S-14

Prospectus

	Page
<u>About This Prospectus</u>	1
<u>Where You Can Find More Information</u>	1
<u>Information We Incorporate By Reference</u>	2
<u>The Company</u>	3
<u>Risk Factors</u>	3
<u>Cautionary Note Regarding Forward-Looking Statements</u>	3
<u>Use of Proceeds</u>	4
<u>Selected Consolidated Financial Data</u>	5
<u>Description of Common Stock</u>	7
<u>Description of Warrants</u>	8
<u>Plan of Distribution</u>	10
<u>Legal Matters</u>	12
<u>Experts</u>	12

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is the prospectus supplement, which describes the terms of this offering. The second part is the accompanying prospectus, which provides more general information, some of which may not apply to this offering. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. If the description of this offering varies between the prospectus supplement and the accompanying prospectus, you should rely on the information in this prospectus supplement, which supersedes the information in the accompanying prospectus. This prospectus supplement contains information about the securities offered in this offering and may add, update or change information in the accompanying prospectus. Before you invest in any of the securities offered under this prospectus supplement, you should carefully read both this prospectus supplement and the accompanying prospectus together with additional information under the heading **Where You Can Find More Information** and **Information We Incorporate By Reference**.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and in the accompanying prospectus or any free writing prospectus that we may provide. We have not authorized anyone to provide you with different information. If anyone provides you with different or additional information, you should not rely on it. You should not assume that the information contained in this prospectus supplement, the accompanying prospectus, any free writing prospectus that we may provide or any document incorporated by reference is accurate as of any date other than the date mentioned on the cover page of these documents. We are not making offers to sell the securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation.

References in this prospectus supplement and the accompanying prospectus to the terms **we**, **us**, **Athersys** or the **Company** or other similar terms mean Athersys, Inc. and its consolidated subsidiaries, unless we state otherwise or the context indicates otherwise.

Table of Contents

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational reporting requirements of the Securities Exchange Act of 1934. We file reports, proxy statements and other information with the SEC. Our SEC filings are available over the Internet at the SEC's website at <http://www.sec.gov>. You may read and copy any reports, statements and other information filed by us at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call 1-800-SEC-0330 for further information on the Public Reference Room.

We make available, free of charge, on our website at <http://www.athersys.com>, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports and statements as soon as reasonably practicable after they are filed with the SEC. The contents of our website are not part of this prospectus supplement or the accompanying prospectus, and the reference to our website does not constitute incorporation by reference into this prospectus supplement or the accompanying prospectus of the information contained at that site, other than documents we file with the SEC that are incorporated by reference into this prospectus supplement and the accompanying prospectus.

INFORMATION WE INCORPORATE BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus supplement and the accompanying prospectus the information in documents we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus supplement and the accompanying prospectus, and information that we file later with the SEC will automatically update and supersede this information. Any statement contained in any document incorporated or deemed to be incorporated by reference in this prospectus supplement and the accompanying prospectus shall be deemed to be modified or superseded to the extent that a statement contained in or omitted from this prospectus supplement or the accompanying prospectus, or in any other subsequently filed document that also is or is deemed to be incorporated by reference, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement or the accompanying prospectus.

We incorporate by reference the documents listed below and any future documents that we file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement:

our annual report on Form 10-K for the year ended December 31, 2012;

our quarterly reports on Form 10-Q for the quarters ended March 31, 2013, June 30, 2013 and September 30, 2013;

our current reports on Form 8-K filed on January 8, 2013, February 28, 2013, June 18, 2013, June 20, 2013, September 20, 2013 and October 23, 2013; and

the description of our common stock set forth in the registration statement on Form 8-A filed on December 6, 2007, and all amendments and reports filed for the purpose of updating that description.

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We will not, however, incorporate by reference in this prospectus supplement or the accompanying prospectus any documents or portions thereof that are not deemed filed with the SEC, including any information furnished pursuant to Item 2.02 or Item 7.01 of our current reports on Form 8-K unless, and except to the extent, specified in such current reports.

We will provide you with a copy of any of these filings (other than an exhibit to these filings, unless the exhibit is specifically incorporated by reference into the filing requested) at no cost if you submit a request to us by writing or telephoning us at the following address and telephone number:

Athersys, Inc.

3201 Carnegie Avenue

Cleveland, Ohio 44115-2634

(216) 367-9495

Attn: Secretary

S-iii

Table of Contents

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that involve risks and uncertainties. These forward-looking statements relate to, among other things, the expected timetable for development of our product candidates, our growth strategy and our future financial performance, including our operations, economic performance, financial condition, prospects and other future events. We have attempted to identify forward-looking statements by using such words as anticipates, believes, can, continue, could, estimate, expects, intends, may, plans, potential, should, suggest, will or other similar expressions. These forward-looking statements are only predictions and are largely based on our current expectations. These forward-looking statements appear in a number of places in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference.

In addition, a number of known and unknown risks, uncertainties and other factors could affect the accuracy of these statements. Some of the more significant known risks that we face that could cause actual results to differ materially from those implied by forward-looking statements are the risks and uncertainties inherent in the process of discovering, developing and commercializing products that are safe and effective for use as human therapeutics, such as the uncertainty regarding market acceptance of our product candidates and our ability to generate revenues, including MultiStem[®] for the treatment of inflammatory bowel disease, acute myocardial infarction, stroke and other disease indications, including traumatic brain injury, and the prevention of graft-versus-host disease. These risks may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements.

Other important factors to consider in evaluating our forward-looking statements include:

final results from our clinical trials evaluating MultiStem[®] cell therapy in ulcerative colitis and ischemic stroke;

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

our ability to successfully initiate and complete clinical trials;

our ability to raise additional capital;

changes in external market factors;

changes in our industry's overall performance;

changes in our business strategy;

our ability to protect and defend our intellectual property and related business operations, including the successful prosecution of our patent applications and enforcement of our patent rights, and operate our business in an environment of rapid technology and intellectual property development;

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 agreements;

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.

S-iv

Table of Contents

These factors and the other risk factors described in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference are not necessarily all of the important factors that could cause actual results to differ materially from those expressed in any of our forward-looking statements. Other unknown or unpredictable factors also could harm our results. Consequently, there can be no assurance that the actual results or developments anticipated by us will be realized or, even if substantially realized, that they will have the expected consequences to or effects on us. We cannot guarantee that any forward-looking statement will be realized, although we believe we have been prudent in our plans and assumptions. Achievement of future results is subject to risks, uncertainties and inaccurate assumptions.

We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. You are advised, however, to consult any further disclosures we make on related subjects in our reports on Forms 10-K, 10-Q and 8-K filed with the SEC.

S-v

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary may not contain all of the information that you should consider before investing in our securities. We urge you to read this entire prospectus supplement, the accompanying prospectus and the documents incorporated by reference carefully, including the section entitled Risk Factors and the financial statements and other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus.

The Company

We are an international biotechnology company that is focused primarily 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. We have established a portfolio of therapeutic product development programs to address significant unmet medical needs in multiple disease areas. We are developing the MultiStem[®] cell therapy, our lead platform product, a patented and proprietary allogeneic stem cell product that has been evaluated in two completed Phase I clinical trials and is currently being evaluated in two ongoing Phase II clinical trials. Our current clinical development programs are focused on treating inflammatory & immune disorders, neurological conditions, cardiovascular disease and other conditions. These represent major areas of clinical need, as well as substantial commercial opportunities.

We believe MultiStem[®] cell therapy represents a breakthrough in the field of regenerative medicine and stem cell therapy and could be used to treat a range of disease indications. MultiStem[®] is a patented and proprietary cell therapy that enhances tissue repair and healing in multiple ways, including reducing inflammatory damage, protecting tissue that is at risk following acute or ischemic injury, and promoting formation of new blood vessels in regions of ischemic injury. The MultiStem[®] cells appear to be responsive to the environment in which they are administered, homing to sites of injury and active disease response and producing proteins that may provide benefit in acute or chronic conditions. In contrast to traditional pharmaceutical products or biologics that generally act through a single biological mechanism of action, the MultiStem[®] product can enhance healing and tissue repair through multiple distinct mechanisms acting simultaneously, by producing a range of therapeutic factors and dynamically responding to the needs of the body resulting in a more effective therapeutic response.

The MultiStem[®] product is unique among regenerative medicine approaches, because it can be manufactured on a large scale, may be administered in an off-the-shelf manner with minimal processing, and can augment healing in multiple ways, providing biological potency other cell therapy approaches cannot. Additionally, the MultiStem[®] product 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. While the product does not permanently engraft in the patient, the therapeutic effects of treatment with MultiStem[®] cells appear to be quite durable.

We believe the therapeutic and commercial potential for MultiStem[®] to be very broad, applying to many areas of significant unmet medical need. We are pursuing opportunities in several 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, the MultiStem[®] product appears to have far broader potential and could be developed in different formulations and with different delivery approaches to efficiently treat a range of disease indications.

We have already evaluated the use of MultiStem[®] cells as a potential treatment for a range of disease indications. Working with an international network of leading investigators and prominent research and clinical institutions, and through our own internal efforts, we have explored the potential for MultiStem[®] cells to be used in acute and chronic

forms of inflammatory & immune disorders, neurological conditions, cardiovascular disease, certain pulmonary conditions and other areas.

To date, we have successfully advanced MultiStem® product candidates into five clinical stage programs, each of which addresses a significant area of medical need and represents a large commercial market opportunity. MultiStem® has been evaluated in two completed clinical trials, one exploring the potential to treat patients that have suffered a heart attack, and the other evaluating the potential to reduce graft versus host disease, or GvHD, as well as

S-1

Table of Contents

other complications, and to provide supportive care to patients being treated for leukemia or related conditions. MultiStem® is currently being evaluated in two additional clinical programs in the inflammatory & immune disease and neurological areas. In one study, which is being conducted with our partner Pfizer Inc., MultiStem® is being administered to patients with inflammatory bowel disease. In another ongoing study, we are evaluating the potential to treat patients that have suffered neurological damage from a stroke. In addition, a leading clinical center in Europe, and a research collaborator, has recently received authorization to conduct an initial clinical trial evaluating administration of MultiStem® in patients that have received a solid organ transplant.

In addition to our MultiStem® programs, we have applied our pharmaceutical discovery capabilities to identify and develop novel pharmaceuticals to treat obesity, related metabolic conditions such as diabetes, and certain neurological indications, such as schizophrenia, as well as 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. Our 5HT2c agonist program for obesity works by the same mechanism as Lorcaserin, which was recently approved by the Food and Drug Administration for the treatment of obesity, and we believe our compounds may have the potential for providing superior weight loss performance, while also achieving a superior safety and tolerability profile. Certain compounds that we have developed may also have relevance in other disease areas, such as the treatment of schizophrenia.

Company Information

We were incorporated in Delaware on October 24, 1995. On June 8, 2007, we merged with a wholly owned subsidiary of BTHC VI, Inc., a Delaware corporation, and, on August 31, 2007, BTHC VI, Inc. changed its name to Athersys, Inc. 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 supplement or the accompanying prospectus, other than documents that we file with the SEC that are incorporated by reference into this prospectus supplement and the accompanying prospectus.

Table of Contents

The Offering

Common stock offered by us	10,000,000 shares.
Warrants	3,500,000 shares issuable upon the exercise of warrants. Each purchaser will receive two warrants, consisting of (i) one immediately exercisable warrant to purchase approximately 0.21 shares of common stock and (ii) one warrant exercisable six months from the date of closing to purchase approximately 0.14 shares of common stock. The warrants will have an initial exercise price of \$2.50 per share. The warrants will be exercisable until March 31, 2015.
Price per fixed combination	\$2.00.
Common stock to be outstanding immediately after this offering(1)	70,524,210 shares (assuming that we sell the maximum number of shares of common stock in this offering).
Use of proceeds	We currently expect to use the net proceeds from this offering for working capital and general corporate purposes. See Use of Proceeds.
Risk factors	You should carefully read and consider the information set forth in Risk Factors beginning on page S-4 of this prospectus supplement before investing in our securities.
NASDAQ Capital Market symbol	ATHX. There is no established public trading market for the warrants and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange.

(1) The number of shares of common stock to be outstanding after the offering is based on 60,524,210 shares of common stock outstanding as of November 26, 2013 and excludes:

7,804,677 shares of common stock reserved for issuance upon the exercise of options and restricted stock units granted under our equity compensation plans as of September 30, 2013;

5,409,027 shares of common stock that may be issued upon exercise of outstanding warrants as of September 30, 2013 with a weighted average exercise price of \$1.74 per share, 3,950,001 of which are issuable pursuant to warrants that currently have an exercise price of \$1.01 with full ratchet anti-dilution price protection, subject to certain exceptions;

3,500,000 shares of common stock issuable upon exercise of the warrants to be issued to the investors in this offering, at an exercise price of \$2.50 per share; and

shares of common stock that we may issue to Aspire Capital Fund LLC, which we refer to as Aspire Capital, pursuant to a common stock purchase agreement we entered into on October 22, 2013, which we refer to as the Aspire Purchase Agreement.

S-3

Table of Contents

RISK FACTORS

*Investing in our securities involves significant risk. Prior to making a decision about investing in our securities, you should carefully consider the specific risk factors included below, as well as the risk factors discussed under the heading **Risk Factors** in our most recent annual report on Form 10-K and in our quarterly reports on Form 10-Q filed subsequently thereto, which are incorporated by reference in this prospectus supplement and the accompanying prospectus and may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. The risks and uncertainties we have described are not the only ones we may face. Additional risks and uncertainties not currently known to us or that we currently deem immaterial may also affect our operations. If any of these risks actually occurs, our business, results of operations and financial condition could suffer. In that case, the trading price of our securities could decline, and you could lose all or a part of your investment.*

You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on an assumed offering price of \$2.00 per fixed combination of securities, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of approximately (\$1.57) per share in the net tangible book value of the common stock. See the section entitled **Dilution** in this prospectus supplement for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

There is no public market for the warrants to purchase common stock in this offering.

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing the warrants on any securities exchange or for quotation on the NASDAQ Capital Market. Without an active market, the liquidity of the warrants will be limited.

Table of Contents

USE OF PROCEEDS

We expect to receive net proceeds from this offering of approximately \$18.5 million after deducting the placement agent fee and our estimated offering expenses, assuming that we sell 10,000,000 shares of common stock in this offering. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual number of shares of common stock sold, placement agent fee and proceeds to us are not presently determinable and may be substantially less than the maximum amount set forth above.

We currently intend to use the net proceeds from this offering for working capital and general corporate purposes, including the funding of our ongoing clinical trials and potential expansion of certain clinical trials to take advantage of emerging international regulatory initiatives designed to accelerate the development and commercialization of regenerative medicine therapies.

Pending the application of the net proceeds as described above, we may invest the net proceeds from this offering in short-term, investment grade, interest-bearing securities.

Table of Contents**DILUTION**

Investors in shares of our common stock offered in this offering will experience an immediate dilution in the net tangible book value of their common stock from the public offering price of the common stock. The net tangible book value of our common stock as of September 30, 2013 was approximately \$11.5 million, or approximately \$0.19 per share of common stock. Net tangible book value per share of our common stock is calculated by subtracting our total liabilities from our total tangible assets, which is equal to total assets less intangible assets, and dividing this amount by the number of shares of common stock outstanding.

Dilution per share represents the difference between the public offering price per share of our common stock and the adjusted net tangible book value per share of our common stock included in this offering after giving effect to this offering. After giving effect to the sale of all of the securities offered in this offering at the offering price of \$2.00 per fixed combination of securities and shares of common stock sold by us under the Aspire Purchase Agreement since September 30, 2013, and after deducting the placement agent fee and our estimated offering expenses, our net tangible book value as of September 30, 2013 would have been approximately \$30.4 million, or approximately \$0.43 per share of common stock. This change represents an immediate increase in the net tangible book value of \$0.24 per share of common stock to our existing stockholders and an immediate and substantial dilution in net tangible book value of \$1.57 per share of common stock to new investors. The following table illustrates this per share dilution:

Offering price per fixed combination	\$ 2.00
Net tangible book value per share as of September 30, 2013	\$ 0.19
Increase in net tangible book value per share attributable to new investors	\$ 0.24
Net tangible book value per share after this offering	\$ 0.43
Dilution per share to new investors	\$ 1.57

The above information excludes:

7,804,677 shares of common stock reserved for issuance upon the exercise of options and restricted stock units granted under our equity compensation plans as of September 30, 2013;

5,409,027 shares of common stock that may be issued upon exercise of outstanding warrants as of September 30, 2013 with a weighted average exercise price of \$1.74 per share, 3,950,001 of which are issuable pursuant to warrants that currently have an exercise price of \$1.01 with full ratchet anti-dilution price protection, subject to certain exceptions;

3,500,000 shares of common stock issuable upon exercise of the warrants to be issued to the investors in this offering, at an exercise price of \$2.50 per share; and

shares of common stock that we may issue in the future to Aspire Capital pursuant to the Aspire Purchase Agreement.

S-6

Table of Contents**CAPITALIZATION**

The following table shows our cash and cash equivalents and capitalization as of September 30, 2013 on an actual basis and on an as adjusted basis to reflect the sale of 10,000,000 shares of our common stock offered in this offering, after deducting the placement agent fee and our estimated offering expenses.

This table should be read in conjunction with our financial statements and the accompanying notes and Management's Discussion and Analysis of Financial Condition and Results of Operations contained in the annual, quarterly and other reports filed by us with the SEC, which are incorporated by reference in this prospectus supplement and the accompanying prospectus.

	As of September 30, 2013	
	Actual	As Adjusted
	(in thousands, except share data)	
Cash and cash equivalents	\$ 17,814	\$ 36,264
Warrant liabilities and note payable	\$ 4,841	\$ 4,841
Stockholders' equity:		
Preferred stock, at stated value; 10,000,000 shares authorized, and no shares issued and outstanding at September 30, 2013, actual and as adjusted		
Common stock, \$0.001 par value; 150,000,000 shares authorized, and 59,890,877 shares issued and outstanding at September 30, 2013, actual, and 69,890,877 shares issued and outstanding at September 30, 2013, as adjusted	60	70
Additional paid-in capital	266,077	284,517
Accumulated deficit	(254,643)	(254,643)
Total stockholders' equity	11,494	29,944
Total capitalization	\$ 16,335	\$ 34,785

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, 2013		
Fourth Quarter (through November 26, 2013)	\$ 2.22	\$ 1.52
Third Quarter	\$ 1.99	\$ 1.47
Second Quarter	\$ 2.42	\$ 1.54
First Quarter	\$ 1.89	\$ 1.07
Year ending December 31, 2012		
Fourth Quarter	\$ 1.47	\$ 0.95
Third Quarter	\$ 1.75	\$ 1.35
Second Quarter	\$ 1.71	\$ 1.25
First Quarter	\$ 2.33	\$ 1.49
Year ending December 31, 2011		
Fourth Quarter	\$ 2.42	\$ 1.13
Third Quarter	\$ 2.86	\$ 1.00
Second Quarter	\$ 3.10	\$ 2.50
First Quarter	\$ 3.08	\$ 2.35

The last reported sale price of our common stock on the NASDAQ Capital Market on November 26, 2013 was \$2.06 per share.

 Holders

As of November 26, 2013, there were approximately 545 holders of record of our common stock. Additionally, shares of common stock are held by financial institutions as nominees for beneficial owners that are deposited into participant accounts at DTC, which are considered to be held of record by Cede & Co. and are included in the holders of record as one stockholder.

 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 three years ended December 31, 2012. 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

DESCRIPTION OF SECURITIES WE ARE OFFERING

The shares of common stock and warrants and the shares of common stock issuable upon exercise of the warrants offered in this offering will be issued pursuant to a securities purchase agreement between each of the investors and us. We urge you to review the securities purchase agreement and the form of warrant, which are included as exhibits to a current report on Form 8-K filed with the SEC in connection with this offering, for a complete description of the terms and conditions applicable to the securities. The following brief summary of the material terms and provisions of the warrants is subject to, and qualified in its entirety by, the form of warrant. This prospectus supplement also relates to the offering of the shares of our common stock issuable upon exercise, if any, of the warrants issued to the investors in this offering. The securities will be sold in multiples of a fixed combination consisting of (i) one share of common stock, (ii) one immediately exercisable warrant to purchase approximately 0.21 shares of common stock, referred to below as the Series A warrants, and (iii) one warrant exercisable six months from the date of closing to purchase approximately 0.14 shares of common stock, referred to below as the Series B warrants. We are offering the fixed combination at a negotiated price of \$2.00 per fixed combination.

Common Stock

The following description of our common stock is a summary. It is not complete and is subject to and qualified in its entirety by our certificate of incorporation and bylaws, as amended, a copy of each of which has been incorporated as an exhibit to the registration statement of which this prospectus supplement forms a part.

As of the date of this prospectus supplement, our certificate of incorporation authorizes us to issue 150,000,000 shares of common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share.

A description of the general terms and provisions of our common stock and each other class of our securities that qualifies or limits our common stock is set forth under the caption **Description of Common Stock** on page 7 of the accompanying prospectus.

Warrants

The warrants offered in this offering will be issued in registered form pursuant to a securities purchase agreement between each of the investors and us. You should review a copy of the securities purchase agreement, and the form of warrant, which have been filed as exhibits to a current report on Form 8-K filed with the SEC in connection with this offering, for a complete description of the terms and conditions applicable to the warrants. The following is a brief summary of the warrants and is subject in all respects to the provisions contained in the warrants.

Exercisability. The Series A warrants are exercisable at any time on or after the original date of issuance and expire on March 31, 2015. The Series B warrants are exercisable at any time on or after six months from the original date of issuance and expire on March 31, 2015. The warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). The number of warrant shares that may be acquired by any holder upon any exercise of the warrant will be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of common stock then beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of common stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act does not exceed either 4.99% or 9.99%, depending on the holder's initial election, of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise). We refer to this as the beneficial ownership limitation. The holder may elect to increase or decrease this beneficial

ownership limitation to any other percentage, but not in excess of 9.99% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise), provided that any such increase or decrease will not be effective until 61 days after such written notice is delivered.

Cashless Exercise. If at any time during the warrant exercisability period there is no effective registration statement registering, or the prospectus contained in any registration statement is not available for, the issuance of the shares of common stock issuable upon exercise of the warrants, the warrants may be exercised by means of a cashless exercise in which a warrant holder will be entitled to surrender a portion of the shares of common stock subject to the warrant in lieu of cash for the exercise price.

Table of Contents

Exercise Price. The exercise price of the warrants is \$2.50. The exercise price is subject to appropriate adjustment in the event of stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock.

Transferability. Subject to applicable securities laws, the warrants may be transferred at the option of the holders upon surrender of the warrants to us together with the appropriate instruments of transfer.

Listing. There is no established public trading market for the warrants and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange.

Fundamental Transactions. If, while any warrants are outstanding, we consummate any fundamental transaction, as described in the warrants and generally including any consolidation or merger into another corporation, the consummation of a transaction whereby another entity acquires more than 50% of our outstanding voting stock, or the sale, lease, license, assignment, transfer, conveyance or other disposition of substantially all of our assets, the holder of any outstanding warrants will receive upon exercise of the warrants, the securities or other consideration to which a holder of the number of shares of common stock then deliverable upon the exercise of such warrants would have been entitled upon the fundamental transaction. Furthermore, we cannot enter into a fundamental transaction unless the successor entity assumes in writing all of our obligations to the warrant holders.

Rights as a Stockholder. Except as otherwise provided in the warrants or by virtue of a holder's ownership of shares of our common stock, the holders of the warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their warrants.

Waivers and Amendments. Any term of the warrants may be amended or waived with our written consent and the written consent of the holders of warrants.

Table of Contents**PLAN OF DISTRIBUTION**

Pursuant to a placement agency agreement between us and Maxim Group LLC, we have engaged Maxim Group LLC as the lead placement agent in connection with this offering. Maxim Group LLC has retained First Analysis Securities Corporation to act as co-placement agents in connection with this offering. The placement agents are not purchasing or selling any of the securities we are offering, and are not required to arrange the purchase or sale of any specific number of securities or dollar amount, but the placement agents have agreed to use reasonable best efforts to arrange for the sale of the securities.

The placement agency agreement provides that the obligations of the placement agents are subject to certain conditions precedent, including, among other things, the absence of any material adverse change in our business and the receipt of customary opinions and closing certificates.

The placement agents propose to arrange for the sale of the securities we are offering pursuant to this prospectus supplement to one or more investors through securities purchase agreements directly between the purchasers and us. All of the securities will be sold at the same price and, we expect, at a single closing. We established the price following negotiations with prospective investors and with reference to the prevailing market price of our common stock, recent trends in such price and other factors. It is possible that not all of the securities we are offering pursuant to this prospectus supplement will be sold at the closing, in which case our net proceeds would be reduced. We expect that the sale of the securities will be completed on the date indicated on the cover page of this prospectus supplement.

Commissions and Expenses

We will pay the placement agents a placement agent fee equal to 6.0% of the gross proceeds of this offering. The following table shows the per share and total placement agent fee we will pay to the placement agents in connection with the sale of the securities, assuming the purchase of all of the securities we are offering.

Per fixed combination	\$ 0.12
Total	\$ 1,200,000

We estimate the total expenses of this offering, which will be payable by us, excluding the placement agent fee, will be approximately \$350,000. The maximum fees to be received by any member of the Financial Industry Regulatory Association, or FINRA, or independent broker-dealer may not be greater than eight percent (8%) of the initial gross proceeds from the sale of any shares of common stock being offered hereby. After deducting the placement agent fee due to the placement agents and our estimated offering expenses, we expect the net proceeds from this offering to be approximately \$18.5 million.

We have agreed to indemnify the placement agents against certain liabilities, including liabilities under the Securities Act of 1933. We have also agreed to contribute to payments the placement agents may be required to make in respect to such liabilities.

We, along with our executive officers and directors, have agreed to certain lock-up provisions with regard to future sales of our common stock for a period of 90 days after the offering. See **No Sales of Similar Securities**.

The placement agency agreement is included as Exhibit 1.1 to our Current Report on Form 8-K filed with the SEC in connection with this offering.

No Sales of Similar Securities

We and our executive officers and directors have agreed, subject to certain exceptions, not to sell or transfer any common stock or securities convertible into, exchangeable for, exercisable for, or repayable with common stock, other than the securities that we may sell in this offering, for 90 days after the date of this prospectus supplement. Specifically, we and these other individuals have agreed, as applicable, not to directly or indirectly offer, sell, contract to sell, hypothecate, pledge or otherwise dispose of (or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise)), including the filing (or participation in the filing) of a registration statement with the SEC in respect of, or establish or increase a put equivalent position or liquidate or

S-11

Table of Contents

decrease a call equivalent position within the meaning of Section 16 of the Exchange Act with respect to, any shares of common stock or any of our or our subsidiaries' securities that would entitle the holder thereof to acquire at any time common stock beneficially owned, held or hereafter acquired by such holder.

The foregoing restrictions with respect to our officers and directors do not apply to:

transfers as a bona fide gift or gifts, provided that the donee or donees thereof agree to be bound in writing by the restrictions set forth above;

transfers to any trust for the direct or indirect benefit of such holder or the immediate family of such holder, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth above, and provided further that any such transfer shall not involve a disposition for value;

with the prior written consent of the investors, the acquisition or exercise of an option or warrant to purchase shares of, or any other equity award for, common stock (or any securities convertible into or exercisable or exchangeable for common stock), including the sale of a portion of stock to be issued in connection with such exercise to finance a cashless exercise, provided that any such shares issued upon exercise of such option or warrant (or any securities convertible into or exercisable or exchangeable for common stock) shall continue to be subject to the applicable restrictions set forth above;

the purchase or sale of our securities pursuant to a plan, contract or instruction that satisfies all of the requirements of Rule 10b5-1(c)(1)(i)(B) of the Exchange Act that was in effect prior to the date hereof; or

the disposition of shares of common stock to satisfy any tax withholding obligations upon the vesting of shares of restricted common stock or other equity award held by such holder.

The foregoing restrictions with respect to us do not apply to:

securities offered in this offering, including upon conversion of the warrants;

any shares of common stock issued upon the exercise of an option or warrant or the conversion of a security outstanding on the date of this prospectus supplement;

any shares of common stock issued or options to purchase common stock granted to employees, directors and/or consultants pursuant to our equity compensation plans; and

any shares of common stock issued as consideration for mergers, acquisitions, other business combinations, or strategic alliances.

Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol ATHX. There is no established public trading market for the warrants and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange.

Electronic Distribution

This prospectus supplement and the accompanying prospectus may be made available in electronic format on websites or through other online services maintained by the placement agents, or by their respective affiliates. Other than this prospectus supplement and the accompanying prospectus in electronic format, the information on the placement agents' websites and any information contained in any other websites maintained by the placement agents is not part of this prospectus supplement or the accompanying prospectus or the registration statement of which this prospectus supplement and the accompanying prospectus forms a part, has not been approved and/or endorsed by us or the placement agents, and should not be relied upon by investors.

The foregoing does not purport to be a complete statement of the terms and conditions of the placement agency agreement and securities purchase agreements. A copy of the placement agency agreement and the form of securities purchase agreement with the investors are included as exhibits to our current report on Form 8-K that will be filed with the SEC and incorporated by reference into the Registration Statement of which this prospectus supplement forms a part. See "Where You Can Find More Information" on page S-iii.

Table of Contents

Regulation M Restrictions

The placement agents may be deemed to be underwriters within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by them and any profit realized on the resale of the securities sold by them while acting as principals might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, each placement agent would be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 415(a)(4) under the Securities Act and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of securities by the placement agents acting as principals. Under these rules and regulations, the placement agents:

must not engage in any stabilization activity in connection with our securities; and

must not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until they have completed their participation in the distribution.

Affiliations

The placement agents and their respective affiliates may provide various investment banking, financial advisory and other services to us and our affiliates for which services they have received, and may in the future receive, customary fees. In the course of their businesses, the placement agents and their respective affiliates may actively trade our securities or loans for their own account or for the accounts of customers, and, accordingly, the placement agents and their respective affiliates may at any time hold long or short positions in such securities or loans.

Table of Contents

LEGAL MATTERS

The validity of the issuance of the securities offered in this offering has been passed upon for us by Jones Day. Ellenoff Grossman & Schole LLP acted as counsel to the lead placement agent in connection with this offering.

EXPERTS

The consolidated financial statements of Athersys, Inc. appearing in Athersys, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2012 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

S-14

Table of Contents

PROSPECTUS SUPPLEMENT

(To Prospectus dated January 22, 2013)

**5,000,000 Shares of Common Stock and
Warrants to Purchase 1,500,000 Shares of Common Stock**

Pursuant to this prospectus supplement and the accompanying prospectus, we are offering 5,000,000 shares of our common stock, par value \$0.001 per share, and warrants to purchase up to an additional 1,500,000 shares of our common stock. The shares and warrants will be sold in multiples of a fixed combination consisting of (i) one share of common stock and (ii) one immediately exercisable warrant to purchase 0.30 shares of common stock. The warrants will have an initial exercise price of \$4.50 per share. The warrants will be exercisable until July 15, 2016. The shares of common stock and the warrants will be issued separately but can only be purchased together in this offering. Each fixed combination will be sold to investors at a price of \$4.10. We refer to the shares of common stock issued or issuable hereunder upon exercise of the warrants and the warrants collectively as the securities. This prospectus supplement also relates to the offering of the shares of common stock issuable upon the exercise of the warrants issued in this offering.

Our common stock is listed on the NASDAQ Capital Market under the symbol ATHX. The last reported sale price of our common stock on the NASDAQ Capital Market on January 9, 2014 was \$4.05 per share.

We have retained Maxim Group LLC to act as our lead placement agent for this offering. Maxim Group LLC has retained First Analysis Securities Corporation to act as co-placement agent in connection with this offering. We have agreed to pay the placement agents the placement agent fee set forth in the table below, which assumes that we sell all of the securities we are offering. The placement agents are not required to arrange for the sale of any specific number of securities or dollar amount but will use reasonable best efforts to arrange for the sale of the securities.

Investing in our securities involves significant risk. Please read carefully the section entitled Risk Factors beginning on page S-4 of this prospectus supplement.

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

Per Fixed Combination	Maximum Offering Amount
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Offering Price	\$	4.100	\$	20,500,000
Placement Agent Fee	\$	0.287	\$	1,435,000
Proceeds to Us, Before Expenses	\$	3.813	\$	19,065,000

We estimate the total expenses of this offering, excluding the placement agent fee, will be approximately \$400,000. Because there is no minimum offering amount required as a condition to closing in this offering, the actual offering amount and net proceeds to us, if any, in this offering may be substantially less than the total maximum offering amounts set forth above. It is anticipated that the shares of common stock and the warrants will be delivered against payment thereon on or before January 15, 2014.

Lead Placement Agent

Maxim Group LLC

Co-Placement Agent

First Analysis Securities Corporation

Prospectus supplement dated January 10, 2014

Table of Contents

TABLE OF CONTENTS

Prospectus Supplement

<u>About This Prospectus Supplement</u>	Page S-ii
<u>Where You Can Find More Information</u>	S-iii
<u>Information We Incorporate By Reference</u>	S-iii
<u>Disclosure Regarding Forward-Looking Statements</u>	S-iv
<u>Prospectus Supplement Summary</u>	S-1
<u>Risk Factors</u>	S-4
<u>Use of Proceeds</u>	S-5
<u>Dilution</u>	S-6
<u>Capitalization</u>	S-7
<u>Common Stock Price Range</u>	S-8
<u>Description of Securities We Are Offering</u>	S-9
<u>Plan of Distribution</u>	S-11
<u>Legal Matters</u>	S-14
<u>Experts</u>	S-14

Prospectus

<u>About This Prospectus</u>	Page 1
<u>Where You Can Find More Information</u>	1
<u>Information We Incorporate By Reference</u>	2
<u>The Company</u>	3
<u>Risk Factors</u>	3
<u>Cautionary Note Regarding Forward-Looking Statements</u>	3
<u>Use of Proceeds</u>	4
<u>Selected Consolidated Financial Data</u>	5
<u>Description of Common Stock</u>	7
<u>Description of Warrants</u>	8
<u>Plan of Distribution</u>	10
<u>Legal Matters</u>	12
<u>Experts</u>	12

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is the prospectus supplement, which describes the terms of this offering. The second part is the accompanying prospectus, which provides more general information, some of which may not apply to this offering. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. If the description of this offering varies between the prospectus supplement and the accompanying prospectus, you should rely on the information in this prospectus supplement, which supersedes the information in the accompanying prospectus. This prospectus supplement contains information about the securities offered in this offering and may add, update or change information in the accompanying prospectus. Before you invest in any of the securities offered under this prospectus supplement, you should carefully read both this prospectus supplement and the accompanying prospectus together with additional information under the heading **Where You Can Find More Information** and **Information We Incorporate By Reference**.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and in the accompanying prospectus or any free writing prospectus that we may provide. We have not authorized anyone to provide you with different information. If anyone provides you with different or additional information, you should not rely on it. You should not assume that the information contained in this prospectus supplement, the accompanying prospectus, any free writing prospectus that we may provide or any document incorporated by reference is accurate as of any date other than the date mentioned on the cover page of these documents. We are not making offers to sell the securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation.

References in this prospectus supplement and the accompanying prospectus to the terms **we**, **us**, **Athersys** or the **Company** or other similar terms mean Athersys, Inc. and its consolidated subsidiaries, unless we state otherwise or the context indicates otherwise.

Table of Contents

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational reporting requirements of the Securities Exchange Act of 1934. We file reports, proxy statements and other information with the SEC. Our SEC filings are available over the Internet at the SEC's website at <http://www.sec.gov>. You may read and copy any reports, statements and other information filed by us at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call 1-800-SEC-0330 for further information on the Public Reference Room.

We make available, free of charge, on our website at <http://www.athersys.com>, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports and statements as soon as reasonably practicable after they are filed with the SEC. The contents of our website are not part of this prospectus supplement or the accompanying prospectus, and the reference to our website does not constitute incorporation by reference into this prospectus supplement or the accompanying prospectus of the information contained at that site, other than documents we file with the SEC that are incorporated by reference into this prospectus supplement and the accompanying prospectus.

INFORMATION WE INCORPORATE BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus supplement and the accompanying prospectus the information in documents we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus supplement and the accompanying prospectus, and information that we file later with the SEC will automatically update and supersede this information. Any statement contained in any document incorporated or deemed to be incorporated by reference in this prospectus supplement and the accompanying prospectus shall be deemed to be modified or superseded to the extent that a statement contained in or omitted from this prospectus supplement or the accompanying prospectus, or in any other subsequently filed document that also is or is deemed to be incorporated by reference, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement or the accompanying prospectus.

We incorporate by reference the documents listed below and any future documents that we file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement:

our annual report on Form 10-K for the year ended December 31, 2012;

our quarterly reports on Form 10-Q for the quarters ended March 31, 2013, June 30, 2013 and September 30, 2013;

our current reports on Form 8-K filed on January 8, 2013, February 28, 2013, June 18, 2013, June 20, 2013, September 20, 2013, October 23, 2013, November 29, 2013 and December 3, 2013; and

the description of our common stock set forth in the registration statement on Form 8-A filed on December 6, 2007, and all amendments and reports filed for the purpose of updating that description.

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We will not, however, incorporate by reference in this prospectus supplement or the accompanying prospectus any documents or portions thereof that are not deemed filed with the SEC, including any information furnished pursuant to Item 2.02 or Item 7.01 of our current reports on Form 8-K unless, and except to the extent, specified in such current reports.

We will provide you with a copy of any of these filings (other than an exhibit to these filings, unless the exhibit is specifically incorporated by reference into the filing requested) at no cost if you submit a request to us by writing or telephoning us at the following address and telephone number:

Athersys, Inc.

3201 Carnegie Avenue

Cleveland, Ohio 44115-2634

(216) 367-9495

Attn: Secretary

S-iii

Table of Contents

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that involve risks and uncertainties. These forward-looking statements relate to, among other things, the expected timetable for development of our product candidates, our growth strategy and our future financial performance, including our operations, economic performance, financial condition, prospects and other future events. We have attempted to identify forward-looking statements by using such words as anticipates, believes, can, continue, could, estimate, expects, intends, may, plans, potential, should, suggest, will or other similar expressions. These forward-looking statements are only predictions and are largely based on our current expectations. These forward-looking statements appear in a number of places in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference.

In addition, a number of known and unknown risks, uncertainties and other factors could affect the accuracy of these statements. Some of the more significant known risks that we face that could cause actual results to differ materially from those implied by forward-looking statements are the risks and uncertainties inherent in the process of discovering, developing and commercializing products that are safe and effective for use as human therapeutics, such as the uncertainty regarding market acceptance of our product candidates and our ability to generate revenues, including MultiStem[®] for the treatment of inflammatory bowel disease, acute myocardial infarction, stroke and other disease indications, including traumatic brain injury, and the prevention of graft-versus-host disease. These risks may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements.

Other important factors to consider in evaluating our forward-looking statements include:

our ability to raise additional capital;

the timing of the results of Pfizer, Inc. s, or Pfizer, Phase II clinical study involving MultiStem[®] cell therapy to ulcerative colitis patients;

final results from our clinical trials evaluating MultiStem[®] cell therapy in ulcerative colitis and ischemic stroke;

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 and defend our intellectual property and related business operations, including the successful prosecution of our patent applications and enforcement of our patent rights, and operate our business in an environment of rapid technology and intellectual property development;

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 agreements;

the success of our efforts to enter into new strategic partnerships and advance our programs, including, without limitation, in Japan;

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.

S-iv

Table of Contents

These factors and the other risk factors described in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference are not necessarily all of the important factors that could cause actual results to differ materially from those expressed in any of our forward-looking statements. Other unknown or unpredictable factors also could harm our results. Consequently, there can be no assurance that the actual results or developments anticipated by us will be realized or, even if substantially realized, that they will have the expected consequences to or effects on us. We cannot guarantee that any forward-looking statement will be realized, although we believe we have been prudent in our plans and assumptions. Achievement of future results is subject to risks, uncertainties and inaccurate assumptions.

We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. You are advised, however, to consult any further disclosures we make on related subjects in our reports on Forms 10-K, 10-Q and 8-K filed with the SEC.

S-v

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary may not contain all of the information that you should consider before investing in our securities. We urge you to read this entire prospectus supplement, the accompanying prospectus and the documents incorporated by reference carefully, including the section entitled Risk Factors and the financial statements and other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus.

The Company

We are an international biotechnology company that is focused primarily 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. We have established a portfolio of therapeutic product development programs to address significant unmet medical needs in multiple disease areas. We are developing the MultiStem[®] cell therapy, our lead platform product, a patented and proprietary allogeneic stem cell product that has been evaluated in two completed Phase I clinical trials and is currently being evaluated in two ongoing Phase II clinical trials. Our current clinical development programs are focused on treating inflammatory & immune disorders, neurological conditions, cardiovascular disease and other conditions. These represent major areas of clinical need, as well as substantial commercial opportunities.

We believe MultiStem[®] cell therapy represents a breakthrough in the field of regenerative medicine and stem cell therapy and could be used to treat a range of disease indications. MultiStem[®] is a patented and proprietary cell therapy that enhances tissue repair and healing in multiple ways, including reducing inflammatory damage, protecting tissue that is at risk following acute or ischemic injury, and promoting formation of new blood vessels in regions of ischemic injury. The MultiStem[®] cells appear to be responsive to the environment in which they are administered, homing to sites of injury and active disease response and producing proteins that may provide benefit in acute or chronic conditions. In contrast to traditional pharmaceutical products or biologics that generally act through a single biological mechanism of action, the MultiStem[®] product can enhance healing and tissue repair through multiple distinct mechanisms acting simultaneously, by producing a range of therapeutic factors and dynamically responding to the needs of the body resulting in a more effective therapeutic response.

The MultiStem[®] product is unique among regenerative medicine approaches, because it can be manufactured on a large scale, may be administered in an off-the-shelf manner with minimal processing, and can augment healing in multiple ways, providing biological potency other cell therapy approaches cannot. Additionally, the MultiStem[®] product 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. While the product does not permanently engraft in the patient, the therapeutic effects of treatment with MultiStem[®] cells appear to be quite durable.

We believe the therapeutic and commercial potential for MultiStem[®] to be very broad, applying to many areas of significant unmet medical need. We are pursuing opportunities in several 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, the MultiStem[®] product appears to have far broader potential and could be developed in different formulations and with different delivery approaches to efficiently treat a range of disease indications.

We have already evaluated the use of MultiStem[®] cells as a potential treatment for a range of disease indications. Working with an international network of leading investigators and prominent research and clinical institutions, and through our own internal efforts, we have explored the potential for MultiStem[®] cells to be used in acute and chronic

forms of inflammatory & immune disorders, neurological conditions, cardiovascular disease, certain pulmonary conditions and other areas.

To date, we have successfully advanced MultiStem[®] product candidates into five clinical stage programs, each of which addresses a significant area of medical need and represents a large commercial market opportunity. MultiStem[®] has been evaluated in two completed clinical trials, one exploring the potential to treat patients that have suffered a heart attack, and the other evaluating the potential to reduce graft versus host disease, or GvHD, as well as

S-1

Table of Contents

other complications, and to provide supportive care to patients being treated for leukemia or related conditions. MultiStem® is currently being evaluated in two additional clinical programs in the inflammatory & immune disease and neurological areas. In one study, which is being conducted with our partner Pfizer, MultiStem® is being administered to patients with inflammatory bowel disease. In another ongoing study, we are evaluating the potential to treat patients that have suffered neurological damage from a stroke. In addition, a leading clinical center in Europe, and a research collaborator, has recently received authorization to conduct an initial clinical trial evaluating administration of MultiStem® in patients that have received a solid organ transplant.

In addition to our MultiStem® programs, we have applied our pharmaceutical discovery capabilities to identify and develop novel pharmaceuticals to treat obesity, related metabolic conditions such as diabetes, and certain neurological indications, such as schizophrenia, as well as 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. Our 5HT2c agonist program for obesity works by the same mechanism as Lorcaserin, which was recently approved by the Food and Drug Administration for the treatment of obesity, and we believe our compounds may have the potential for providing superior weight loss performance, while also achieving a superior safety and tolerability profile. Certain compounds that we have developed may also have relevance in other disease areas, such as the treatment of schizophrenia.

Company Information

We were incorporated in Delaware on October 24, 1995. On June 8, 2007, we merged with a wholly owned subsidiary of BTHC VI, Inc., a Delaware corporation, and, on August 31, 2007, BTHC VI, Inc. changed its name to Athersys, Inc. 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 supplement or the accompanying prospectus, other than documents that we file with the SEC that are incorporated by reference into this prospectus supplement and the accompanying prospectus.

Table of Contents

The Offering

Common stock offered by us	5,000,000 shares.
	1,500,000 shares issuable upon the exercise of warrants.
Warrants	Each purchaser will receive one immediately exercisable warrant to purchase 0.30 shares of common stock. The warrants will have an initial exercise price of \$4.50 per share. The warrants will be exercisable until July 15, 2016.
Price per fixed combination	\$4.10.
Common stock to be outstanding immediately after this offering(1)	76,298,757 shares (assuming that we sell the maximum number of shares of common stock in this offering).
Use of proceeds	We currently expect to use the net proceeds from this offering for working capital and general corporate purposes. See Use of Proceeds.
Risk factors	You should carefully read and consider the information set forth in Risk Factors beginning on page S-4 of this prospectus supplement before investing in our securities.
NASDAQ Capital Market symbol	ATHX. There is no established public trading market for the warrants and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange.

(1) The number of shares of common stock to be outstanding after the offering is based on 71,298,757 shares of common stock outstanding as of January 9, 2014 and excludes:

shares of common stock reserved for issuance upon the exercise of options and restricted stock units granted under our equity compensation plans;

shares of common stock that may be issued upon exercise of outstanding warrants;

1,500,000 shares of common stock issuable upon exercise of the warrants to be issued to the investors in this offering; and

shares of common stock that we may issue to Aspire Capital Fund LLC, which we refer to as Aspire Capital, pursuant to a common stock purchase agreement we entered into on October 22, 2013, which we refer to as the Aspire Purchase Agreement.

S-3

Table of Contents

RISK FACTORS

Investing in our securities involves significant risk. Prior to making a decision about investing in our securities, you should carefully consider the specific risk factors included below, as well as the risk factors discussed under the heading Risk Factors in our most recent annual report on Form 10-K and in our quarterly reports on Form 10-Q filed subsequently thereto, which are incorporated by reference in this prospectus supplement and the accompanying prospectus and may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. The risks and uncertainties we have described are not the only ones we may face. Additional risks and uncertainties not currently known to us or that we currently deem immaterial may also affect our operations. If any of these risks actually occurs, our business, results of operations and financial condition could suffer. In that case, the trading price of our securities could decline, and you could lose all or a part of your investment.

You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on an assumed offering price of \$4.10 per fixed combination of securities, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of approximately (\$3.45) per share in the net tangible book value of the common stock. See the section entitled Dilution in this prospectus supplement for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

There is no public market for the warrants to purchase common stock in this offering.

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing the warrants on any securities exchange or for quotation on the NASDAQ Capital Market. Without an active market, the liquidity of the warrants will be limited.

Table of Contents

USE OF PROCEEDS

We expect to receive net proceeds from this offering of approximately \$18.7 million after deducting the placement agent fee and our estimated offering expenses, assuming that we sell 5,000,000 shares of common stock in this offering. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual number of shares of common stock sold, placement agent fee and proceeds to us are not presently determinable and may be substantially less than the maximum amount set forth above.

We currently intend to use the net proceeds from this offering for working capital and general corporate purposes, including the funding of our ongoing and planned clinical trials and potential expansion of certain clinical trials to take advantage of emerging international regulatory initiatives designed to accelerate the development and commercialization of regenerative medicine therapies, and certain process development and manufacturing initiatives.

Pending the application of the net proceeds as described above, we may invest the net proceeds from this offering in short-term, investment grade, interest-bearing securities.

Table of Contents**DILUTION**

Investors in shares of our common stock offered in this offering will experience an immediate dilution in the net tangible book value of their common stock from the public offering price of the common stock. The net tangible book value of our common stock as of September 30, 2013 was approximately \$11.5 million, or approximately \$0.19 per share of common stock. Net tangible book value per share of our common stock is calculated by subtracting our total liabilities from our total tangible assets, which is equal to total assets less intangible assets, and dividing this amount by the number of shares of common stock outstanding.

Dilution per share represents the difference between the public offering price per share of our common stock and the adjusted net tangible book value per share of our common stock included in this offering after giving effect to this offering. After giving effect to (i) the sale of all of the securities offered in this offering at the offering price of \$4.10 per fixed combination of securities, (ii) shares of common stock sold by us under the Aspire Purchase Agreement since September 30, 2013, (iii) 10,000,000 shares of common stock sold by us in December 2013, (iv) the issuance of 615,277 shares of common stock pursuant to the exercise of outstanding warrants and (v) the vesting of restricted stock units and corresponding issuances of common stock since September 2013, and after deducting the applicable placement agent fees and our estimated offering expenses in connection with this offering and the December 2013 offering, our net tangible book value as of September 30, 2013 would have been approximately \$49.6 million, or approximately \$0.65 per share of common stock. This change represents an immediate increase in the net tangible book value of \$0.46 per share of common stock to our existing stockholders and an immediate and substantial dilution in net tangible book value of \$3.45 per share of common stock to new investors. The following table illustrates this per share dilution:

Offering price per fixed combination	\$ 4.10
Net tangible book value per share as of September 30, 2013	\$ 0.19
Increase in net tangible book value per share attributable to new investors	\$ 0.46
Net tangible book value per share after this offering	\$ 0.65
Dilution per share to new investors	\$ 3.45

The above information excludes:

shares of common stock reserved for issuance upon the exercise of options and restricted stock units granted under our equity compensation plans;

shares of common stock that may be issued upon exercise of outstanding warrants;

1,500,000 shares of common stock issuable upon exercise of the warrants to be issued to the investors in this offering; and

shares of common stock that we may issue in the future to Aspire Capital pursuant to the Aspire Purchase Agreement.

S-6

Table of Contents**CAPITALIZATION**

The following table shows our cash and cash equivalents and capitalization as of September 30, 2013:

on an actual basis;

on a pro forma basis to reflect the sale of 10,000,000 shares of our common stock in December 2013, after deducting the applicable placement agent fee and our estimated expenses in connection with that offering; and

on a pro forma as adjusted basis to reflect the sale of 5,000,000 shares of our common stock offered in this offering and 10,000,000 shares of our common stock in December 2013, after deducting the applicable placement agent fees and our estimated expenses in connection with both offerings.

This table should be read in conjunction with our financial statements and the accompanying notes and Management's Discussion and Analysis of Financial Condition and Results of Operations contained in the annual, quarterly and other reports filed by us with the SEC, which are incorporated by reference in this prospectus supplement and the accompanying prospectus.

	As of September 30, 2013		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands, except share data)		
Cash and cash equivalents	\$ 17,814	\$ 36,264	\$ 54,929
Warrant liabilities and note payable(1)	\$ 4,841	\$ 4,841	\$ 4,841
Stockholders' equity:			
Preferred stock, at stated value; 10,000,000 shares authorized, and no shares issued and outstanding at September 30, 2013, actual, pro forma and pro forma as adjusted			
Common stock, \$0.001 par value; 150,000,000 shares authorized, and 59,890,877 shares issued and outstanding at September 30, 2013, actual, 69,890,877 shares issued and outstanding at September 30, 2013, pro forma, and 74,890,877 shares issued and outstanding at September 30, 2013, pro forma as adjusted	60	70	75
Additional paid-in capital(1)	266,077	284,517	303,177
Accumulated deficit	(254,643)	(254,643)	(254,643)
Total stockholders' equity	11,494	29,944	48,609
Total capitalization	\$ 16,335	\$ 34,785	\$ 53,450

- (1) The warrants issued in connection with this offering and the December 2013 offering may be accounted for as warrant liabilities, which would increase warrant liabilities and decrease additional paid-in capital on a pro forma and pro forma as adjusted basis, but would not impact total capitalization.

S-7

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, 2014		
First Quarter (through January 9, 2014)	\$ 4.33	\$ 2.51
Year ending December 31, 2013		
Fourth Quarter	\$ 2.52	\$ 1.52
Third Quarter	\$ 1.99	\$ 1.47
Second Quarter	\$ 2.42	\$ 1.54
First Quarter	\$ 1.89	\$ 1.07
Year ending December 31, 2012		
Fourth Quarter	\$ 1.47	\$ 0.95
Third Quarter	\$ 1.75	\$ 1.35
Second Quarter	\$ 1.71	\$ 1.25
First Quarter	\$ 2.33	\$ 1.49

The last reported sale price of our common stock on the NASDAQ Capital Market on January 9, 2014 was \$4.05 per share.

 Holders

As of January 9, 2014, there were approximately 543 holders of record of our common stock. Additionally, shares of common stock are held by financial institutions as nominees for beneficial owners that are deposited into participant accounts at DTC, which are considered to be held of record by Cede & Co. and are included in the holders of record as one stockholder.

 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 three years ended December 31, 2012. 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

DESCRIPTION OF SECURITIES WE ARE OFFERING

The shares of common stock and warrants and the shares of common stock issuable upon exercise of the warrants offered in this offering will be issued pursuant to a securities purchase agreement between each of the investors and us. We urge you to review the securities purchase agreement and the form of warrant, which are included as exhibits to a current report on Form 8-K filed with the SEC in connection with this offering, for a complete description of the terms and conditions applicable to the securities. The following brief summary of the material terms and provisions of the warrants is subject to, and qualified in its entirety by, the form of warrant. This prospectus supplement also relates to the offering of the shares of our common stock issuable upon exercise, if any, of the warrants issued to the investors in this offering. The securities will be sold in multiples of a fixed combination consisting of (i) one share of common stock and (ii) one immediately exercisable warrant to purchase 0.30 shares of common stock. We are offering the fixed combination at a negotiated price of \$4.10 per fixed combination.

Common Stock

The following description of our common stock is a summary. It is not complete and is subject to and qualified in its entirety by our certificate of incorporation and bylaws, as amended, a copy of each of which has been incorporated as an exhibit to the registration statement of which this prospectus supplement forms a part.

As of the date of this prospectus supplement, our certificate of incorporation authorizes us to issue 150,000,000 shares of common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share.

A description of the general terms and provisions of our common stock and each other class of our securities that qualifies or limits our common stock is set forth under the caption **Description of Common Stock** on page 7 of the accompanying prospectus.

Warrants

The warrants offered in this offering will be issued in registered form pursuant to a securities purchase agreement between each of the investors and us. You should review a copy of the securities purchase agreement, and the form of warrant, which have been filed as exhibits to a current report on Form 8-K filed with the SEC in connection with this offering, for a complete description of the terms and conditions applicable to the warrants. The following is a brief summary of the warrants and is subject in all respects to the provisions contained in the warrants.

Exercisability. The warrants are exercisable at any time on or after the original date of issuance and expire on July 15, 2016. The warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). The number of warrant shares that may be acquired by any holder upon any exercise of the warrant will be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of common stock then beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of common stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act does not exceed either 4.99% or 9.99%, depending on the holder's initial election, of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise). We refer to this as the beneficial ownership limitation. The holder may elect to increase or decrease this beneficial ownership limitation to any other percentage, but not in excess of 9.99% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise), provided that any such increase or decrease will not be effective until 61 days after such written notice is delivered.

Cashless Exercise. If at any time during the warrant exercisability period there is no effective registration statement registering, or the prospectus contained in any registration statement is not available for, the issuance of the shares of common stock issuable upon exercise of the warrants, the warrants may be exercised by means of a cashless exercise in which a warrant holder will be entitled to surrender a portion of the shares of common stock subject to the warrant in lieu of cash for the exercise price.

S-9

Table of Contents

Exercise Price. The exercise price of the warrants is \$4.50. The exercise price is subject to appropriate adjustment in the event of stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock.

Transferability. Subject to applicable securities laws, the warrants may be transferred at the option of the holders upon surrender of the warrants to us together with the appropriate instruments of transfer.

Listing. There is no established public trading market for the warrants and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange.

Fundamental Transactions. If, while any warrants are outstanding, we consummate any fundamental transaction, as described in the warrants and generally including any consolidation or merger into another corporation, the consummation of a transaction whereby another entity acquires more than 50% of our outstanding voting stock, or the sale, lease, license, assignment, transfer, conveyance or other disposition of substantially all of our assets, the holder of any outstanding warrants will receive upon exercise of the warrants, the securities or other consideration to which a holder of the number of shares of common stock then deliverable upon the exercise of such warrants would have been entitled upon the fundamental transaction. Furthermore, we cannot enter into a fundamental transaction unless the successor entity assumes in writing all of our obligations to the warrant holders.

Rights as a Stockholder. Except as otherwise provided in the warrants or by virtue of a holder's ownership of shares of our common stock, the holders of the warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their warrants.

Waivers and Amendments. Any term of the warrants may be amended or waived with our written consent and the written consent of the holders of warrants.

Table of Contents**PLAN OF DISTRIBUTION**

Pursuant to a placement agency agreement between us and Maxim Group LLC, we have engaged Maxim Group LLC as the lead placement agent in connection with this offering. Maxim Group LLC has retained First Analysis Securities Corporation to act as co-placement agents in connection with this offering. The placement agents are not purchasing or selling any of the securities we are offering, and are not required to arrange the purchase or sale of any specific number of securities or dollar amount, but the placement agents have agreed to use reasonable best efforts to arrange for the sale of the securities.

The placement agency agreement provides that the obligations of the placement agents are subject to certain conditions precedent, including, among other things, the absence of any material adverse change in our business and the receipt of customary opinions and closing certificates.

The placement agents propose to arrange for the sale of the securities we are offering pursuant to this prospectus supplement to one or more investors through securities purchase agreements directly between the purchasers and us. All of the securities will be sold at the same price and, we expect, at a single closing. We established the price following negotiations with prospective investors and with reference to the prevailing market price of our common stock, recent trends in such price and other factors. It is possible that not all of the securities we are offering pursuant to this prospectus supplement will be sold at the closing, in which case our net proceeds would be reduced. We expect that the sale of the securities will be completed on the date indicated on the cover page of this prospectus supplement.

Commissions and Expenses

We will pay the placement agents a placement agent fee equal to 7.0% of the gross proceeds of this offering. The following table shows the per share and total placement agent fee we will pay to the placement agents in connection with the sale of the securities, assuming the purchase of all of the securities we are offering.

Per fixed combination	\$ 0.287
Total	\$ 1,435,000

WBB Securities, LLC, or WBB, has acted as our financial advisor, and will be paid a fee of \$100,000, in connection with this offering. WBB is not acting as a placement agent in connection with this offering, and, accordingly, WBB is not offering any shares of our common stock in connection with this offering.

We estimate the total expenses of this offering, which will be payable by us, excluding the placement agent fee, will be approximately \$400,000. The maximum fees to be received by any member of the Financial Industry Regulatory Association, or FINRA, or independent broker-dealer may not be greater than eight percent (8%) of the initial gross proceeds from the sale of any shares of common stock being offered hereby. After deducting the placement agent fee due to the placement agents and our estimated offering expenses, we expect the net proceeds from this offering to be approximately \$18.7 million.

We have agreed to indemnify the placement agents against certain liabilities, including liabilities under the Securities Act of 1933. We have also agreed to contribute to payments the placement agents may be required to make in respect to such liabilities.

We, along with our executive officers and directors, have agreed to certain lock-up provisions with regard to future sales of our common stock for a period of 90 days after the offering. See **No Sales of Similar Securities**.

The placement agency agreement is included as Exhibit 1.1 to our Current Report on Form 8-K filed with the SEC in connection with this offering.

No Sales of Similar Securities

We and our executive officers and directors have agreed, subject to certain exceptions, not to sell or transfer any common stock or securities convertible into, exchangeable for, exercisable for, or repayable with common stock, other than the securities that we may sell in this offering, for 90 days after the date of this prospectus supplement. Specifically, we and these other individuals have agreed, as applicable, not to directly or indirectly offer, sell, contract to sell, hypothecate, pledge or otherwise dispose of (or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise)), including the filing (or participation in the filing) of a registration statement with the SEC in respect of, or establish or increase a put equivalent position or liquidate or

Table of Contents

decrease a call equivalent position within the meaning of Section 16 of the Exchange Act with respect to, any shares of common stock or any of our or our subsidiaries' securities that would entitle the holder thereof to acquire at any time common stock beneficially owned, held or hereafter acquired by such holder.

The foregoing restrictions with respect to our officers and directors do not apply to:

transfers as a bona fide gift or gifts, provided that the donee or donees thereof agree to be bound in writing by the restrictions set forth above;

transfers to any trust for the direct or indirect benefit of such holder or the immediate family of such holder, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth above, and provided further that any such transfer shall not involve a disposition for value;

with the prior written consent of the investors, the acquisition or exercise of an option or warrant to purchase shares of, or any other equity award for, common stock (or any securities convertible into or exercisable or exchangeable for common stock), including the sale of a portion of stock to be issued in connection with such exercise to finance a cashless exercise, provided that any such shares issued upon exercise of such option or warrant (or any securities convertible into or exercisable or exchangeable for common stock) shall continue to be subject to the applicable restrictions set forth above;

the purchase or sale of our securities pursuant to a plan, contract or instruction that satisfies all of the requirements of Rule 10b5-1(c)(1)(i)(B) of the Exchange Act that was in effect prior to the date hereof; or

the disposition of shares of common stock to satisfy any tax withholding obligations upon the vesting of shares of restricted common stock or other equity award held by such holder.

The foregoing restrictions with respect to us do not apply to:

securities offered in this offering, including upon conversion of the warrants;

any shares of common stock issued upon the exercise of an option or warrant or the conversion of a security outstanding on the date of this prospectus supplement;

any shares of common stock issued or options to purchase common stock granted to employees, directors and/or consultants pursuant to our equity compensation plans; and

any shares of common stock issued as consideration for mergers, acquisitions, other business combinations, or strategic alliances.

Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol ATHX. There is no established public trading market for the warrants and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange.

Electronic Distribution

This prospectus supplement and the accompanying prospectus may be made available in electronic format on websites or through other online services maintained by the placement agents, or by their respective affiliates. Other than this prospectus supplement and the accompanying prospectus in electronic format, the information on the placement agents' websites and any information contained in any other websites maintained by the placement agents is not part of this prospectus supplement or the accompanying prospectus or the registration statement of which this prospectus supplement and the accompanying prospectus forms a part, has not been approved and/or endorsed by us or the placement agents, and should not be relied upon by investors.

The foregoing does not purport to be a complete statement of the terms and conditions of the placement agency agreement and securities purchase agreements. A copy of the placement agency agreement and the form of securities purchase agreement with the investors are included as exhibits to our current report on Form 8-K that will be filed with the SEC and incorporated by reference into the Registration Statement of which this prospectus supplement forms a part. See "Where You Can Find More Information" on page S-iii.

Table of Contents

Regulation M Restrictions

The placement agents may be deemed to be underwriters within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by them and any profit realized on the resale of the securities sold by them while acting as principals might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, each placement agent would be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 415(a)(4) under the Securities Act and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of securities by the placement agents acting as principals. Under these rules and regulations, the placement agents:

must not engage in any stabilization activity in connection with our securities; and

must not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until they have completed their participation in the distribution.

Affiliations

The placement agents and their respective affiliates may provide various investment banking, financial advisory and other services to us and our affiliates for which services they have received, and may in the future receive, customary fees. In the course of their businesses, the placement agents and their respective affiliates may actively trade our securities or loans for their own account or for the accounts of customers, and, accordingly, the placement agents and their respective affiliates may at any time hold long or short positions in such securities or loans.

Table of Contents

LEGAL MATTERS

The validity of the issuance of the securities offered in this offering has been passed upon for us by Jones Day. Ellenoff Grossman & Schole LLP acted as counsel to the lead placement agent in connection with this offering.

EXPERTS

The consolidated financial statements of Athersys, Inc. appearing in Athersys, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2012 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

S-14

Table of Contents

PROSPECTUS

20,000,000 Shares

Common Stock

Warrants

We may from time to time issue up to 20,000,000 shares of our common stock and/or warrants to purchase such common stock in one or more offerings.

We will provide the specific terms of the securities to be offered in one or more supplements to this prospectus. You should read this prospectus and the applicable prospectus supplement carefully before you invest in our securities. This prospectus may not be used to offer and sell our securities unless accompanied by a prospectus supplement describing the method and terms of the offering of those offered securities.

We may sell the securities directly or to or through underwriters or dealers, and also to other purchasers or through agents. The names of any underwriters or agents that are included in a sale of securities to you, and any applicable commissions or discounts, will be stated in an accompanying prospectus supplement. In addition, the underwriters, if any, may over-allot a portion of the securities.

Investing in any of our securities involves risk. Please read carefully the section entitled Risk Factors beginning on page 3 of this prospectus.

Our common stock is listed on the NASDAQ Capital Market under the symbol ATHX. As of January 9, 2013, the aggregate market value of our outstanding common stock held by non-affiliates was approximately \$60 million. We have not offered any of our common stock pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to and including the date 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.

The date of this prospectus is January 22, 2013

Table of Contents

TABLE OF CONTENTS

	Page
<u>About This Prospectus</u>	1
<u>Where You Can Find More Information</u>	1
<u>Information We Incorporate By Reference</u>	2
<u>The Company</u>	3
<u>Risk Factors</u>	3
<u>Cautionary Note Regarding Forward-Looking Statements</u>	3
<u>Use of Proceeds</u>	4
<u>Selected Consolidated Financial Data</u>	5
<u>Description of Common Stock</u>	7
<u>Description of Warrants</u>	8
<u>Plan of Distribution</u>	10
<u>Legal Matters</u>	12
<u>Experts</u>	12

Table of Contents

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the SEC using a shelf registration process. Under this shelf process, we may from time to time sell up to 20,000,000 shares of our common stock and/or warrants to purchase such common stock in one or more offerings.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information under the heading "Where You Can Find More Information" and "Information We Incorporate By Reference."

You should rely only on the information contained or incorporated by reference in this prospectus and in any prospectus supplement or in any free writing prospectus that we may provide you. We have not authorized anyone to provide you with different information. You should not assume that the information contained in this prospectus, any prospectus supplement, any document incorporated by reference or any free writing prospectus is accurate as of any date, other than the date mentioned on the cover page of these documents. We are not making offers to sell the securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation.

References in this prospectus to the terms "we," "us," "Athersys" or "the Company" or other similar terms mean Athersys, Inc. and its consolidated subsidiaries, unless we state otherwise or the context indicates otherwise.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational reporting requirements of the Securities Exchange Act of 1934. We file reports, proxy statements and other information with the SEC. Our SEC filings are available over the Internet at the SEC's website at <http://www.sec.gov>. You may read and copy any reports, statements and other information filed by us at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call 1-800-SEC-0330 for further information on the Public Reference Room.

We make available, free of charge, on our website at <http://www.athersys.com>, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports and statements as soon as reasonably practicable after they are filed with the SEC. The contents of our website are not part of this prospectus, and the reference to our website does not constitute incorporation by reference into this prospectus of the information contained at that site, other than documents we file with the SEC that are incorporated by reference into this prospectus.

Table of Contents

INFORMATION WE INCORPORATE BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus the information in documents we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. Any statement contained in any document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in or omitted from this prospectus or any accompanying prospectus supplement, or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We incorporate by reference the documents listed below and any future documents that we file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (1) after the date of the initial filing of the registration statement of which this prospectus forms a part prior to the effectiveness of the registration statement and (2) after the date of this prospectus until the offering of the securities is terminated.

our annual report on Form 10-K for the year ended December 31, 2011;

our quarterly reports on Form 10-Q for the quarters ended March 31, 2012, June 30, 2012 and September 30, 2012;

our current reports on Form 8-K filed on February 27, 2012, March 15, 2012, June 22, 2012, and January 8, 2013; and

the description of our common stock set forth in the registration statement on Form 8-A filed on December 6, 2007, and all amendments and reports filed for the purpose of updating that description.

We will not, however, incorporate by reference in this prospectus any documents or portions thereof that are not deemed filed with the SEC, including any information furnished pursuant to Item 2.02 or Item 7.01 of our current reports on Form 8-K unless, and except to the extent, specified in such current reports.

We will provide you with a copy of any of these filings (other than an exhibit to these filings, unless the exhibit is specifically incorporated by reference into the filing requested) at no cost, if you submit a request to us by writing or telephoning us at the following address and telephone number:

Athersys, Inc.

3201 Carnegie Avenue

Cleveland, Ohio 44115-2634

(216) 431-9900

Attn: Secretary

Table of Contents

THE COMPANY

We are an international biotechnology company that is focused primarily 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. We 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 completed Phase I clinical trials and is currently being evaluated in two ongoing Phase II clinical trials. Our current clinical development programs are focused on treating inflammatory & immune disorders, neurological conditions, cardiovascular disease, and other conditions. These represent major areas of clinical need, as well as substantial commercial opportunities.

Corporate Information

We are incorporated in Delaware 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 accessible through our website is not part of this prospectus, other than the documents that we file with the SEC that are incorporated by reference into this prospectus.

RISK FACTORS

Investing in our securities involves risk. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading Risk Factors in our most recent annual report on Form 10-K and in our most recent quarterly reports on Form 10-Q, which are incorporated herein by reference and may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations. If any of these risks actually occurs, our business, results of operations and financial condition could suffer. In that case, the trading price of our securities could decline, and you could lose all or a part of your investment.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents incorporated by reference, contains, and any prospectus supplement may contain, 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, potential, continue or the negative of these terms or other similar expressions 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, level of activity, performance, achievement or industry results to differ materially from any future results, levels of activity, performance or achievements described in or implied by these forward-looking 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 inflammatory bowel disease, acute myocardial infarction, stroke and other disease indications, and the prevention of graft-versus-host disease;

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;

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our ability to successfully initiate and complete clinical trials and obtain all necessary regulatory approvals to commercialize our product candidates;

changes in external market factors;

changes in our industry's overall performance;

changes in our business strategy;

Table of Contents

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.

Any forward-looking statement you read in this prospectus, any prospectus supplement or any document incorporated by reference 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. You are advised, however, to consult any further disclosures we make on related subjects in our reports on Forms 10-Q, 8-K and 10-K furnished to the SEC. You should understand that it is not possible to predict or identify all risk factors. Consequently, you should not consider any such list to be a complete set of all potential risks or uncertainties.

Any document incorporated by reference or any prospectus supplement may also contain 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.

USE OF PROCEEDS

Unless we inform you otherwise in the applicable prospectus supplement, we expect to use the net proceeds from the sale of securities for general corporate purposes, including, but not limited to, research and development costs, payment obligations and capital expenditures. Pending any specific application, we may initially invest funds in debt instruments of the U.S. government and its agencies, corporate debt securities, floating-rate notes and A1+/P1 commercial paper.

Table of Contents**SELECTED CONSOLIDATED FINANCIAL DATA**

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 included in our annual report on Form 10-K for the year ended December 31, 2011 and our quarterly report on Form 10-Q for the quarterly period ended September 30, 2012, both of which are incorporated by reference into this prospectus, and the consolidated financial statements and the notes thereto incorporated by reference into this prospectus.

	2011	Year Ended December 31,				Nine Months Ended	
		2010	2009	2008	2007	September 30,	2011
		(in thousands, except share and per share data)					
Consolidated Statement of Operations Data:							
Revenues:							
Contract revenue	\$ 9,015	\$ 6,685	\$ 1,079	\$ 1,880	\$ 1,433	\$ 5,356	\$ 6,712
Grant revenue	1,329	2,254	1,080	1,225	1,827	1,063	1,067
Total revenues	10,344	8,939	2,159	3,105	3,260	6,419	7,779
Costs and expenses:							
Research and development	18,930	14,779	11,920	16,500	15,817	14,701	13,360
General and administrative	4,916	5,387	5,621	5,479	7,975	3,500	3,721
Depreciation	278	284	233	218	283	236	202
Loss from operations	(13,780)	(11,511)	(15,615)	(19,092)	(20,815)	(12,018)	(9,504)
Other (expense) income:							
Other (expense) income, net	(51)	(69)	(126)	48	2,017	499	(68)
Interest income	85	203	375	1,146	1,591	21	78
Interest expense				(94)	(1,263)		
Accretion of premium on convertible debt					(456)		
Net loss	\$ (13,746)	\$ (11,377)	\$ (15,366)	\$ (17,992)	\$ (18,926)	\$ (11,498)	\$ (9,494)
Preferred stock dividends					(659)		
Deemed dividend resulting from induced conversion of convertible preferred stock					(4,800)		
Net loss attributable to common stockholders	\$ (13,746)	\$ (11,377)	\$ (15,366)	\$ (17,992)	\$ (24,385)	\$ (11,498)	\$ (9,494)
Basic and diluted net loss per common share attributable to common stockholders	\$ (0.59)	\$ (0.60)	\$ (0.81)	\$ (0.95)	\$ (2.26)	\$ (0.41)	\$ (0.41)
Weighted average shares outstanding, basic and diluted	23,239,019	18,929,749	18,928,379	18,927,988	10,811,119	28,256,873	22,966,047

	2011	2010	December 31,		2007	September 30,	
			2009	2008		2012	2011
	(in thousands)						
Consolidated Balance Sheet Data:							
Cash and cash equivalents	\$ 8,785	\$ 2,105	\$ 11,167	\$ 12,552	\$ 13,248	\$ 7,903	\$ 8,539
Available-for-sale securities, short-term	3,999	13,076	10,135	15,460	22,477		8,003
Working capital	6,986	9,106	16,291	26,789	32,849	4,397	10,333
Available-for-sale securities, long-term			5,080	3,601	13,850		
Total assets	15,701	19,106	28,331	33,877	52,225	10,077	18,861
Warrant liabilities and note payable	983					3,813	1,100

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Total stockholders equity	7,298	9,005	18,957	31,563	47,631	1,950	10,579
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Table of Contents

Effective January 1, 2012, we adopted the Financial Accounting Standards Board's, or FASB's, Accounting Standards Update, or ASU, No. 2011-05, Comprehensive Income (Topic 220): Presentation of Comprehensive Income, as amended by ASU 2011-12, Comprehensive Income (Topic 220): Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income in Accounting Standards Update No. 2011-05. These updates revise the manner in which entities present comprehensive income in their financial statements. The following selected financial information revises historical information to illustrate the new presentation required by this pronouncement for the periods presented.

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

	December 31, 2011	Year Ended December 31, 2010 (in thousands)	December 31, 2009
Net loss	\$ (13,746)	\$ (11,377)	\$ (15,366)
Items included in other comprehensive income (loss):			
Proportional share of comprehensive income of equity-method investment	28		
Unrealized loss on available-for-sale securities	(26)	(45)	(49)
Other comprehensive income (loss) items	2	(45)	(49)
Comprehensive loss	\$ (13,744)	\$ (11,422)	\$ (15,415)

Table of Contents

DESCRIPTION OF COMMON STOCK

We are authorized to issue 100,000,000 shares of common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share.

Common Stock

This section describes the general terms and provisions of our common stock. For more detailed information, you should refer to our Certificate of Incorporation and Bylaws, copies of which have been filed with the SEC. These documents are also incorporated by reference into the registration statement of which this prospectus forms a part.

Holders of shares of common stock will be entitled to receive dividends if and when declared by the board of directors from funds legally available therefor, and, upon liquidation, dissolution or winding-up of our company, will be entitled to share ratably in all assets remaining after payment of liabilities. The holders of shares of common stock will not have any preemptive rights, but will be entitled to one vote for each share of common stock held of record. Stockholders will not have the right to cumulate their votes for the election of directors. The shares of common stock offered hereby, when issued, will be fully paid and nonassessable.

Preferred Stock

This section describes the general terms and provisions of our preferred stock. For more detailed information, you should refer to our Certificate of Incorporation and Bylaws, copies of which have been filed with the SEC. These documents are also incorporated by reference into the registration statement of which this prospectus forms a part.

Our board of directors is authorized, without action by our stockholders, to designate and issue up to 10,000,000 shares of preferred stock, par value \$0.001 per share, in one or more series. The board of directors can fix the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of common stock. The issuance of preferred stock, while providing flexibility in connection with possible future financings, acquisitions and other corporate purposes could, under certain circumstances, have the effect of delaying, deferring or preventing a change in control of us and could adversely affect the market price of our common stock. We do not have any shares of preferred stock outstanding, and we have no current plans to issue any preferred stock.

Transfer Agent and Registrar

We have appointed Computershare Investor Services as the transfer agent and registrar for our common stock.

Listing

Our common stock is listed on the NASDAQ Capital Market under the symbol ATHX.

Table of Contents

DESCRIPTION OF WARRANTS

General

We may issue warrants for the purchase of shares of common stock. The following description sets forth certain general terms and provisions of the warrants that we may offer pursuant to this prospectus. The particular terms of the warrants and the extent, if any, to which the general terms and provisions may apply to the warrants so offered will be described in the applicable prospectus supplement.

Warrants may be issued independently or together with other securities and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants and will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants.

A copy of the forms of the warrant agreement and the warrant certificate relating to any particular issue of warrants will be filed with the SEC each time we issue warrants, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the warrant agreement and the related warrant certificate, see [Where You Can Find More Information](#).

Common Stock Warrants

The prospectus supplement relating to a particular issue of warrants to issue shares of common stock will describe the terms of the common stock warrants, including the following:

the title of the warrants;

the offering price for the warrants, if any;

the aggregate number of the warrants;

if applicable, the date from and after which the warrants and the common stock issued with the warrants will be separately transferable;

the number of shares of common stock that may be purchased upon exercise of a warrant and the price at which the shares may be purchased upon exercise;

the dates on which the right to exercise the warrants commence and expire;

if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;

the currency or currency units in which the offering price, if any, and the exercise price are payable;

if applicable, a discussion of material United States federal income tax considerations;

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anti-dilution provisions of the warrants, if any;

redemption or call provisions, if any, applicable to the warrants;

any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants; and

any other information we think is important about the warrants.

Table of Contents

Exercise of Warrants

Each warrant will entitle the holder of the warrant to purchase at the exercise price set forth in the applicable prospectus supplement the shares of common stock being offered. Holders may exercise warrants at any time up to the close of business on the expiration date set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants are void. Holders may exercise warrants as set forth in the prospectus supplement relating to the warrants being offered.

Until a holder exercises the warrants to purchase our shares of common stock, the holder will not have any rights as a holder of our common stock by virtue of ownership of warrants.

Table of Contents

PLAN OF DISTRIBUTION

We may sell the offered securities in and outside the United States:

through underwriters or dealers;

directly to purchasers;

in a rights offering;

in at the market offerings, within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market on an exchange or otherwise;

through agents; or

through a combination of any of these methods.

The prospectus supplement will include the following information:

the terms of the offering;

the names of any underwriters or agents;

the name or names of any managing underwriter or underwriters;

the purchase price or initial public offering price of the securities;

the net proceeds from the sale of the securities;

any delayed delivery arrangements;

any underwriting discounts, commissions and other items constituting underwriters' compensation;

any discounts or concessions allowed or reallocated or paid to dealers; and

any commissions paid to agents.

Sale through Underwriters or Dealers

If underwriters are used in the sale, the underwriters will acquire the securities for their own account. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless we inform you otherwise in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers.

During and after an offering through underwriters, the underwriters may purchase and sell the securities in the open market. These transactions may include over-allotment and stabilizing transactions and purchases to cover syndicate short positions created in connection with the offering. The underwriters may also impose a penalty bid, which means that selling concessions allowed to syndicate members or other broker-dealers for the offered securities sold for their account may be reclaimed by the syndicate if the offered securities are repurchased by the syndicate in stabilizing or covering transactions. These activities may stabilize, maintain or otherwise affect the market price of the offered securities, which may be higher than the price that might otherwise prevail in the open market. If commenced, the underwriters may discontinue these activities at any time.

Table of Contents

If dealers are used in the sale of securities, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. We will include in the prospectus supplement the names of the dealers and the terms of the transaction.

Direct Sales and Sales through Agents

We may sell the securities directly. In this case, no underwriters or agents would be involved. We may also sell the securities through agents designated from time to time. In the prospectus supplement, we will name any agent involved in the offer or sale of the offered securities, and we will describe any commissions payable to the agent. Unless we inform you otherwise in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. We will describe the terms of any sales of these securities in the prospectus supplement.

Remarketing Arrangements

Offered securities may also be offered and sold, if so indicated in the applicable prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more remarketing firms, acting as principals for their own accounts or as agents for us. Any remarketing firm will be identified and the terms of its agreements, if any, with us and its compensation will be described in the applicable prospectus supplement.

Delayed Delivery Contracts

If we so indicate in the prospectus supplement, we may authorize agents, underwriters or dealers to solicit offers from certain types of institutions to purchase securities from us at the public offering price under delayed delivery contracts. These contracts would provide for payment and delivery on a specified date in the future. The contracts would be subject only to those conditions described in the prospectus supplement. The prospectus supplement will describe the commission payable for solicitation of those contracts.

General Information

We may have agreements with the agents, dealers, underwriters and remarketing firms to indemnify them against certain civil liabilities, including liabilities under the Securities Act, or to contribute with respect to payments that the agents, dealers, underwriters or remarketing firms may be required to make. Agents, dealers, underwriters and remarketing firms may be customers of, engage in transactions with or perform services for us in the ordinary course of their businesses.

Table of Contents

LEGAL MATTERS

Jones Day will pass upon the validity of the securities being offered hereby.

EXPERTS

The consolidated financial statements of Athersys, Inc. appearing in Athersys, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2011, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

Table of Contents**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution.**

The following are the estimated expenses of the issuance and distribution of the securities being registered, all of which are payable by us. All of the items below, except for the registration fee, are estimates.

Securities and Exchange Commission registration fee	\$ 3,191.76	
Transfer agent and registrar fees		*
Printing expenses		*
Accountant's fees and expenses		*
Legal fees and expenses		*
Miscellaneous		*
Total	\$	*

Previously paid.

* Estimated expenses are presently not known and cannot be estimated.

Item 15. Indemnification of Directors and Officers.

Delaware law provides that directors of a company will not be personally liable for monetary damages for breach of their fiduciary duty as directors, except for liabilities:

for any breach of their duty of loyalty to the company or its stockholders;

for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;

for unlawful payment of dividend or unlawful stock repurchase or redemption, as provided under Section 174 of the General Corporation Law of the State of Delaware (the *DGCL*); or

for any transaction from which the director derived an improper personal benefit.

The provisions of Delaware law that relate to indemnification expressly state that the rights provided by the statute are not exclusive and are in addition to any rights provided in bylaws, by agreement, or otherwise. Our certificate of incorporation also provides that if Delaware law is amended to further eliminate or limit the liability of directors, then the liability of our directors shall be eliminated or limited, without further stockholder action, to the fullest extent

permissible under Delaware law as so amended.

Our certificate of incorporation requires us to indemnify, to the fullest extent permitted by the DGCL, any and all persons we have the power to indemnify under the DGCL from and against any and all expenses, liabilities or other matters covered by the DGCL. Additionally, our certificate of incorporation requires us to indemnify each of our directors and officers in each and every situation where the DGCL permits or empowers us (but does not obligate us) to provide such indemnification, subject to the provisions of our bylaws. Our bylaws requires us to indemnify our directors to the fullest extent permitted by the DGCL, and permits us, to the extent authorized by the board of directors, to indemnify our officers and any other person we have the power to indemnify against liability, reasonable expense or other matters.

Under our certificate of incorporation, indemnification may be provided to directors and officers acting in their official capacity, as well as in other capacities. Indemnification will continue for persons who have ceased to be directors, officers, employees or agents, and will inure to the benefit of their heirs, executors and administrators. Additionally, under our certificate of incorporation, except under certain circumstances, our directors are not personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director. At present, there is no pending litigation or proceeding involving any of our directors, officers, or employees in which indemnification is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

Our bylaws also permit us to secure insurance on behalf of any officer, director, employee, or agent for any liability arising out of actions in his or her capacity as an officer, director, employee, or agent. We have obtained an

Table of Contents

insurance policy that insures our directors and officers against losses, above a deductible amount, from specified types of claims. Finally, we have entered into indemnification agreements with most of our directors and executive officers, which agreements, among other things, require us to indemnify them and advance expenses to them relating to indemnification suits to the fullest extent permitted by law.

Item 16. Exhibits.

The following documents are exhibits to the registration statement:

Exhibit Number	Description
1.1	Placement Agency Agreement, dated as of November 27, 2013, between the Company and Maxim Group, LLC (incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on November 29, 2013).
1.2	Placement Agency Agreement, dated as of January 10, 2014, between the Company and Maxim Group, LLC (incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on January 13, 2014).
4.1	Certificate of Incorporation of Athersys, Inc., as amended as of June 28, 2013 (incorporated herein by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q (Commission File No. 001-33876) filed with the Commission on August 13, 2013).
4.2	Bylaws of Athersys, Inc., as amended as of October 30, 2007 (incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (Commission File No. 000-52108) filed with the Commission on October 31, 2007).
4.3	Form of Warrant (incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on November 29, 2013).
4.4	Form of Amendment No. 1 to Common Stock Purchase Warrant.
4.5	Form of Warrant (incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on January 13, 2014).
5.1	Opinion of Jones Day (incorporated by reference to Exhibit 5.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on December 3, 2013).
5.2	Opinion of Jones Day (incorporated by reference to Exhibit 5.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on January 15, 2014).
10.1	Form of Securities Purchase Agreement (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed

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with the Commission on November 29, 2013).

- 10.2 Form of Securities Purchase Agreement (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on January 13, 2014).
- 23.1 Consent of Independent Registered Public Accounting Firm Ernst & Young LLP.
- 23.2 Consent of Jones Day (included in Exhibit 5.1 to this Registration Statement).
- 23.3 Consent of Jones Day (included in Exhibit 5.2 to this Registration Statement).
- 24.1* Power of Attorney.

* Previously filed.

Table of Contents

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

1. To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

- (i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
- (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement; *provided, however*, that the undertakings set forth in paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this registration statement.

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

3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

4. That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

- (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
- (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or

(x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be a part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness and the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is a part of the registration statement will, as to a purchaser with a time of contract of

Table of Contents

sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

5. That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

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

Table of Contents**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cleveland, State of Ohio, on January 28, 2015.

ATHERSYS, INC.

By /s/ Gil Van Bokkelen
 Gil Van Bokkelen
 Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this registration statement on Form S-3 has been signed below by the following persons in the capacities indicated as of January 28, 2015:

Signatures	Title
/s/ Gil Van Bokkelen	Chief Executive Officer and Chairman of the Board of Directors
Gil Van Bokkelen Ph.D.	(Principal Executive Officer)
*	Vice President of Finance
Laura K. Campbell	(Principal Financial Officer and Principal Accounting Officer)
*	Executive Vice President, Chief Scientific Officer and Director
John Harrington Ph.D.	
*	Director
Lee E. Babiss	
*	Director
Kenneth Traub	
*	Director
Jack L. Wyszomierski	
	Director
Ismail Kola	

*

Director

Lorin J. Randall

* The undersigned by signing his name hereto does sign and execute this registration statement on Form S-3 pursuant to the Powers of Attorney executed by the above-named directors and officers of the registrant, which are being filed herewith on behalf of such directors and officers.

By: /s/ Gil Van Bokkelen
Gil Van Bokkelen, Attorney-in-Fact

January 28, 2015

II-5

Table of Contents**INDEX TO EXHIBITS**

Exhibit Number	Description
1.1	Placement Agency Agreement, dated as of November 27, 2013, between the Company and Maxim Group, LLC (incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on November 29, 2013).
1.2	Placement Agency Agreement, dated as of January 10, 2014, between the Company and Maxim Group, LLC (incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on January 13, 2014).
4.1	Certificate of Incorporation of Athersys, Inc., as amended as of June 28, 2013 (incorporated herein by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q (Commission File No. 001-33876) filed with the Commission on August 13, 2013).
4.2	Bylaws of Athersys, Inc., as amended as of October 30, 2007 (incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (Commission File No. 000-52108) filed with the Commission on October 31, 2007).
4.3	Form of Warrant (incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on November 29, 2013).
4.4	Form of Amendment No. 1 to Common Stock Purchase Warrant.
4.5	Form of Warrant (incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on January 13, 2014).
5.1	Opinion of Jones Day (incorporated by reference to Exhibit 5.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on December 3, 2013).
5.2	Opinion of Jones Day (incorporated by reference to Exhibit 5.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on January 15, 2014).
10.1	Form of Securities Purchase Agreement (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on November 29, 2013).
10.2	Form of Securities Purchase Agreement (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (Commission File No. 001-33876) filed with the Commission on January 13, 2014).
23.1	Consent of Independent Registered Public Accounting Firm Ernst & Young LLP.
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