Actinium Pharmaceuticals, Inc.
Form S-8
July 07, 2014

As filed with the Securities and Exchange Commission on July 7, 2014

Registration No. 333-_____

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM S-8

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ACTINIUM PHARMACEUTICALS, INC.
(Exact Name of Registrant as Specified in Its Charter)

DELAWARE	88-0378336
(State or other Jurisdiction of Incorporation or Organization)	(I.R.S Employer Identification Number)
501 5th Avenue, 3rd Floor, New York, New York	10017
(Address of Principal Executive Offices)	(Zip Code)

ACTINIUM PHARMACEUTICALS, INC.
AMENDED AND RESTATED
2013 STOCK PLAN
AND
ACTINIUM PHARMACEUTICALS, INC.
AMENDED AND RESTATED
2013 EQUITY INCENTIVE PLAN
(Full Title of the Plan)

Kaushik J. Dave
President and Chief Executive Officer
501 5th Avenue, 3rd Floor
New York, New York 10017
Phone: (732) 243-9495
Fax: (732) 243-9499
(Name, Address and Telephone Number of Agent for Service)

Copy to:
Thomas Slusarczyk, Esq.
Hiscock & Barclay, LLP
300 South State Street1

Syracuse, New York 13202
(315) 624-7360

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. (Check one):

Large accelerated filer ¨	Accelerated filer ¨
Non-accelerated filer ¨	Smaller reporting company x
(Do not check if a smaller reporting company)	

CALCULATION OF REGISTRATION FEE

Title of of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share (2)	Proposed maximum aggregate offering price (2)	Amount of registration fee
Common Stock $0.001 par value (3)	5,750,000	$ 7.07	$ 40,652,500	$ 5,236.04
Common Stock $0.001 par value (4)	1,000,000	$ 7.07	$ 7,070,000	$ 910.62
Total	6,750,000	$	$ 47,722,500	$ 6,146.66

(1) This Registration Statement also covers additional shares of Actinium Pharmaceuticals, Inc. common stock that may be issuable by reason of stock splits, stock dividends, or other adjustment provisions of the Actinium Pharmaceticals, Inc. Amended and Restated Stock Plan and Actinium Pharmaceutical's Amended and Restated 2013 Equity Incentive Plan, in accordance with Rule 416 under the Securities Act of 1933, as amended.

(2) Estimated solely for the purpose of calculating the registration fee computed pursuant to Rule 457(c) and (h), upon the basis of the average of the high and low prices of the common stock as quoted on NYSE MKT on June 30, 2014.

(3) Represents the number of shares of Common Stock issuable upon the exercise of (a) currently outstanding stock options granted pursuant to the Actinium Pharmaceuticals Amended and Restated 2013 Stock Plan, and (b) stock options that are expected to be granted pursuant to the Actinium Pharmaceuticals Amended and Restated 2013 Stock Plan.

(4) Represents the number of shares of restricted Common Stock (a) currently granted pursuant to the Actinium Pharmaceuticals Amended and Restated 2013 Equity Incentive Plan, and (b) restricted common stock that are expected to be granted pursuant to the Actinium Pharmaceuticals Amended and Restated 2013 Equity Incentive Plan.

EXPLANATORY NOTE

This Form S-8 relates to (i) the offer and resale of up to an aggregate of 3,532,239 shares of common stock, par value $0.001 per share (the "Common Stock"), of Actinium Pharmaceuticals, Inc., a Delaware corporation (the "Company"), underlying outstanding options previously granted under the Actinium Pharmaceuticals, Inc. 2013 Amended and Restated 2013 Stock Plan and restricted common stock previously granted under the Actinium Pharmaceuticals, Inc. 2013 Amended and Restated Equity Incentive Plan (collectively, the "Plans") and (ii) up to an aggregate of 3,217,761 shares of Common Stock of the Company underlying outstanding options and restricted common stock which are subject to future grants under the Plans. This Registration Statement contains two parts. First, the materials that follow Part I up to Part II of this Registration Statement constitute the reoffer prospectus, prepared in accordance with Part I of Form S-3, in accordance with General Instruction C of Form S-8, covering resales of "restricted securities" or "control securities" (as defined in General Instruction C of Form S-8). Such resale prospectus relates to shares of the Common Stock of the Company, and together with its subsidiaries, ("we", "our" and "us") previously issued to certain of our employees pursuant to the Plans. The amount of shares to be reoffered or resold by means of the reoffer prospectus contained herein by each selling stockholder, and any other person with whom such selling stockholder is acting in concert for the purpose of selling securities of the Company, may not exceed, during any three-month period, the amount specified in Rule 144(e) of the Securities Act of 1933, as amended (the "Securities Act"). The second part contains information required to be set forth in the registration statement pursuant to Part II of Form S-8.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS*

Item 1. Plan Information.*

Item 2. Registrant Information and Employee Plan Annual Information.**

* The documents containing the information specified in Part I of Form S-8 will be sent or given to employees as specified in Rule 428(b)(1) of the Securities Act. Such documents need not be filed with the Securities and Exchange Commission (the "Commission") either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 of the Securities Act. These documents and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this Registration Statement, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

** Upon written or oral request, any document incorporated by reference in Item 3 of Part II of this Registration Statement (which documents are incorporated by reference in this Section 10(a) prospectus), and any document required to be delivered to a participant in the Plans pursuant to Rule 428(b) or additional information about the Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Stock Plan and the Actinium Pharmaceuticals, Inc. Amended and Restated Equity Incentive Plan are available, without charge, by contacting the Company at:

Actinium Pharmaceuticals, Inc.
501 5th Avenue, 3rd Floor
New York, New York 10017
Attention: Kaushik J. Dave, Tel: (732) 243-9495.

Reoffer Prospectus

ACTINIUM PHARMACEUTICALS, INC.

3,532,239 Shares of Common Stock

This reoffer prospectus relates to the offer and resale of up to an aggregate of 3,532,239 shares of common stock, par value $0.001 per share, of Actinium Pharmaceuticals, Inc., a Delaware corporation, underlying outstanding options previously granted under the Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Stock Plan and Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Equity Incentive Plan. The shares of common stock subject to this prospectus may be offered and sold from time to time by the selling stockholders listed in this prospectus after the filing of the related registration statement on Form S-8. This prospectus has been prepared for the purpose of registering future sales of the shares of common stock by the selling stockholders, on a continuous or delayed basis, to the public without restriction. Upon the effectiveness of the related registration statement, the selling stockholders may offer these shares for resale for his/her own account from time to time.

The selling stockholders may sell the shares of common stock covered by this prospectus through various means, including directly or indirectly to purchasers, in one or more transactions on any stock market on which such shares are traded at the time of sale, in privately negotiated transactions, or through a combination of these methods. The selling stockholders selling any shares pursuant to this prospectus may be deemed to be an “underwriter” within the meaning of the Securities Act of 1933, as amended. Any commissions received by a broker or dealer in connection with resales of shares may be deemed to be underwriting commissions or discounts under the Securities Act. For additional information on the selling stockholders’ possible methods of sale, you should refer to the section in this prospectus entitled “Plan of Distribution.”

We will not receive any proceeds from the sale of the shares of common stock being offered by the selling stockholders. We will pay all of the expenses associated with this prospectus. Brokerage commissions and similar selling expenses, if any, attributable to the offer or sale of the shares of common stock covered by this prospectus will be borne by the respective selling stockholders.

Our common stock is quoted on NYSE MKT under the symbol “ATNM.” On July 2, 2014, the closing price of our common stock on such market was $7.52 per share.

An investment in our securities is highly speculative, involves a high degree of risk and should be considered only by persons who can afford the loss of their entire investment. Please see “Risk Factors” beginning on page 4 of this prospectus.

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

The date of this Prospectus is July 7, 2014.

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ABOUT THIS PROSPECTUS

You should rely only on the information contained in or incorporated by reference into this prospectus. We have not authorized any other person to provide you with additional information or information different from that contained in or incorporated by reference into this prospectus. The selling stockholders may, from time to time, offer to sell shares of our common stock only in jurisdictions where the offer or sale is permitted. You should not assume that the information contained in this prospectus is accurate as of any date other than the date on the front cover of this prospectus or that the information contained in any document incorporated by reference into this prospectus is accurate as of any date other than the date of the document incorporated by reference.

FORWARD-LOOKING STATEMENTS

This prospectus and other documents we file with the Commission contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, such as statements concerning our expected results of operations, financial resources or our projected plans for the expansion of our business, as well as other estimates relating to future operations. Words or phrases of expectation or uncertainty like “expect,” “believe,” “continue,” “anticipate,” “estimate,” “may,” “will,” “could,” “opportunity,” “future,” “project,” “can,” “intend,” “plan,” “potential,” “predict”, the nega or variations of such words and similar expressions are intended to identify “forward-looking statements,” although not all forward-looking statements contain these identifying words. Although we do not make forward looking statements unless we believe we have a reasonable basis for doing so, we cannot guarantee their accuracy. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks outlined under “Risk Factors” or elsewhere in this prospectus, which may cause our or our industry’s actual results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time and it is not possible for us to predict all risk factors, nor can we address the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause our actual results to differ materially from those contained in any forward-looking statements. All forward-looking statements included in this document are based on information available to us on the date hereof, and we assumes no obligation to update any such forward-looking statements.

PROSPECTUS SUMMARY

The following summary contains basic information about Actinium Pharmaceuticals, Inc. and this prospectus. It may not contain all of the information that is important to you. For a more complete understanding, we encourage you to read the entire prospectus and the documents incorporated by reference into this prospectus. In this prospectus, the words “Company,” “we,” “our” and “us” refer to Actinium Pharmaceuticals, Inc. and our subsidiaries.

The Commission allows us to “incorporate by reference” certain information that 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 part of this prospectus, and information that we file later with the Commission will update automatically, supplement and/or supersede this information. Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference in this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in any other document which also is or is deemed to be incorporated by reference in this prospectus 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. You should read the following summary together with the more detailed information regarding our company, our common stock and our financial statements and the notes to those statements appearing elsewhere in this prospectus or incorporated herein by reference.

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Business Overview

We are a biopharmaceutical company focused on the $54 billion market for cancer drugs. Our most advanced products are Actimab™-A, an antibody-drug construct containing actinium 225 (Ac-225), currently in human clinical trials for acute myeloid leukemia (AML) and Iomab™-B, an antibody-drug construct containing iodine 131 (I-131), used in myeloconditioning for hematopoietic stem cells transplantation (HSCT) in various indications. We are currently designing a trial which we intend to submit for registration approval in HSCT in the settings of refractory and relapsed acute myeloid leukemia in older patients. We are developing our cancer drugs using our expertise in radioimmunotherapy. In addition, our Ac-225 based drug development relies on the patented Alpha Particle Immunotherapy Technology (APIT) platform technology co-developed with Memorial Sloan Kettering Cancer Center (MSKCC), whose indirect subsidiary, Actinium Holdings Ltd., is a significant stockholder of us. The APIT technology couples monoclonal antibodies (mAb) with extremely potent but comparatively safe alpha particle emitting radioactive isotopes, in particular actinium 225 and bismuth 213. The final drug construct is designed to specifically target and kill cancer cells while minimizing side effects. We intend to develop a number of products for different types of cancer and derive revenue from partnering relationships with large pharmaceutical companies and/or direct sales of its products in specialty markets in the United States.

Business Strategy

We intend to potentially develop our most advanced clinical stage drug candidates through approval in the case of Iomab™-B and up to and including a Phase 2 proof of concept human clinical trial (a trial designed to provide data on the drug's efficacy) in the case of Actimab™-A. If these efforts are successful, we may elect to commercialize Iomab™-B on our own or with a partner in the United States and/or outside of the United States to out-license the rights to develop and commercialize the product to a strategic partner. In the case of Actimab™-A, we will most likely seek to enter into strategic partnerships whereby the strategic partner(s) co-fund(s) further human clinical trials of the drug that are needed to obtain regulatory approvals for commercial sale within and outside of the United States. In parallel, we intend to identify and begin initial human trials with additional actinium-225 drug candidates in other cancer indications. We intend to retain marketing rights for our products in the United States whenever possible and out-license marketing rights to our partners for the rest of the world.

Market Opportunity

We are competing in the marketplace for cancer treatments estimated at over $54 billion in 2011 sales pursuant to an IMS Health report and projected to exceed $76 billion per year by 2015, according to the Global Academy for Medical Education. While surgery, radiation and chemotherapy remain staple treatments for cancer, their use is limited by the fact that they often cause substantial damage to normal cells. On the other hand, targeted monoclonal antibody therapies exert most or all of their effect directly on cancer cells, but often lack sufficient killing power to eradicate all cancer cells with just the antibody. A new approach for treating cancer is to combine the precision of antibody-based targeting agents with the killing power of radiation or chemotherapy by attaching powerful killing agents to precise molecular carriers called monoclonal antibodies (mAb). We use monoclonal antibodies labeled with radioisotopes to deliver potent doses of radiation directly to cancer cells while sparing healthy tissues. The radioisotopes we use are the alpha emitter Ac-225 and the beta emitter I-131. I-131 is among the best known and well characterized radioisotopes. It is used very successfully in treatment of papillary and follicular thyroid cancer as well as other thyroid conditions. It is also attached to a monoclonal antibody in treatment of Non-Hodgkin's Lymphoma (NHL). It is also used experimentally with different carriers in other cancers. Ac-225 has many unique properties and we are a leader in developing this alpha emitter for clinical applications using its proprietary APIT technology.

Our most advanced products are Actimab™-A, Ac-225 labeled mAb for treatment of newly diagnosed AML, a cancer of the blood, in patients ineligible for currently approved therapies, and Iomab™-B, I-131 labeled mAb for preparation of

relapsed and refractory AML patients for HSCT. Iomab™-B offers a potentially curative treatment for these patients most of whom do not survive beyond a year after being diagnosed with this condition. Iomab™-B has also demonstrated efficacy in HSCT preparation for other blood cancer indications, including Myelodysplastic Syndrome (MDS), acute lymphoblastic leukemia (ALL), Hodgkin's Lymphoma, and NHL. These are all follow-on indications for which Iomab™-B can be developed and it is our intention to explore these opportunities when financing becomes available.

Other potential product opportunities in which a significant amount of preclinical work is being undertaken include metastatic colorectal cancer, metastatic prostate cancer and antiangiogenesis which reduces the blood supply to solid tumors.

We believe that our biggest market opportunity lies in the applicability of our APIT platform technology to a wide variety of cancers. A broad range of solid and blood borne cancers can be potentially targeted by monoclonal (mAbs) to enable treatment with its APIT technology. The APIT technology could potentially be applied to mAbs that are already Food and Drug Administration (FDA) approved to create more efficacious and/or safer drugs ("biobetters").

Clinical Trials

Actimab™-A

Actimab™-A is our product currently in multicenter Phase 1/2 clinical trial in AML. It consists of the monoclonal antibody Lintuzumab and alpha emitting radioisotope actinium 225 (Ac-225). The indication in the ongoing trial is newly diagnosed AML patients over the age of 60.

Previous clinical trials leading to this trial included:

- Phase 1 clinical trial with Bismab®-A , the first generation product consisting of the same monoclonal antibody Lintuzumab and Bi-213 alpha emitter, a daughter of Ac-225;
- Phase 1/2 clinical trial with Bismab®-A , the first generation product consisting of the same monoclonal antibody Lintuzumab and Bi-213 alpha emitter, a daughter of Ac-225; and
- Dose escalating pilot Phase 1 clinical trial with Actimab™-A, the current product consisting of the Lintuzumab monoclonal antibody and Ac-225 alpha emitter.

Completed Actimab™-A related clinical trials outcomes:

- The Phase 2 arm of the Bismab®-A drug study has shown signs of the drug's efficacy and safety, including reduction in peripheral blast counts and complete responses in some patients. Bi-213 is a daughter, i.e., product of the degradation of Ac-225, with cancer cell killing properties similar to Ac-225 but is less potent.
- The Phase 1 Actimab™-A trial at MSKCC with a single-dose administration of Actimab™-A showed elimination of leukemia cells from blood in 67% of all evaluable patients who receive a full dose and in 83% of those treated at dose levels above 0.5 microcuries per kilogram (μCi/kg), and eradication of leukemia cells in both blood and bone marrow in 20% of all evaluable patients and 25% of those treated at dose levels above 0.5 μCi/kg. Maximum tolerated single dose in this trial was established at 3 μCi/kg.

Ongoing Actimab™-A trial:

We have commenced our first company sponsored Phase 1/2 multi-center trial with fractionated (two) doses of Actimab™-A, Actinium's lead product for treatment of elderly AML that consists of an AML specific monoclonal antibody (HuM195, also known as Lintuzumab™) and the actinium 225 radioactive isotope attached to it. We are conducting this trial at world-class cancer institutions such as MSKCC, Johns Hopkins Medicine, University of Pennsylvania Health System, Fred Hutchinson Cancer Center and MD Anderson Cancer Center.

Bismab®-A trials and the Phase 1 Actimab™-A trial were focused on relapsed, refractory and other difficult to treat acute myeloid leukemia patients. The current multicenter Phase 1/2 trial is focused on newly diagnosed AML patients who have historically had better outcomes. In addition, the new trial includes low doses of chemotherapy with the goal of further improving patient outcomes.

Iomab™-B

Iomab™-B is our product currently in preparation for a pivotal Phase 3 multicenter clinical trial. It consists of the monoclonal antibody BC8 and beta emitting radioisotope iodine 131 (I-131). The indication for that trial is bone marrow conditioning for hematopoietic stem cell transplant in relapsed and refractory AML patients over the age of 55.

Previous Iomab™-B clinical trials leading to the Phase 3 trial currently in preparation included:

Indications	N	Key Findings
AML, MDS, ALL (adult)	34	-7/34 patients with median disease free state (DFS) of 17 years. -18/34 patients in remission at day 80
AML >1st remission (adult)	23	-15/23 in remission at day 28
AML 1st remission (age 16-50)	43	-23/43 DFS from 5-16 years -30/43 in remission at day 28 -33/43 in remission at day 80
High-risk MDS, advanced AML (age 50+)	68 in dose escalation study 31 treated at MTD	-CR (complete remission) in all patients -1 yr survival ~40% for all patients -1 yr survival ~45% for pts treated at MTD (maximum tolerated dose)
High-risk MDS, AML (age 18– 50)	14 in dose escalation	All patients achieved full donor chimerism by day 28 post-transplant
High-risk MDS, AML -haploidentical donors (adult)	8 in dose escalation	-6/8 treated patients achieved CR by day.28 -8/8 patients 100% donor chimerism by day28

Ongoing Iomab™-B clinical trials include:

Indications	Phase
Relapsed and refractory Hodgkin Lymphoma and NHL (adult)	Phase 1
Advanced AML, ALL and MDS (adult)	Phase 2
AML 1st remission (age 16-50)	Phase 2
High-risk MDS, advanced AML (age 16-50)	Phase 2

There are additional ongoing clinical trials with BC8 antibody labeled with yttrium 90 (Y-90).

Phase 3 Iomab™-B clinical trial in preparation:

The FDA agreed to the Phase 3 clinical trial design as follows:

- Single pivotal study, pending trial results;
- Patient population: refractory AML patients over the age of 55, where refractory includes primary and secondary refractory and relapsed after <6 months in complete remission;
- Trial arms: study arm and control arm with physician's choice of conventional care with curative intent; and
- Trial size: 150 patients total (75 patients per arm).

For the three months ended March 31, 2014, we had no revenue and our net loss was approximately $16.7 million. For the twelve months ended December 31, 2013, we had no revenue and our net loss was approximately $10.8 million.

Intellectual Property

We have developed or in-licensed numerous patents and patent applications and possess substantial know-how and trade secrets relating to the development and commercialization of our products. As of June 1, 2014, our patent portfolio includes: 35 issued and pending patents, of which 7 are issued in the United States, 26 are issued or pending internationally, and 2 are pending in the United States. Many of the patents are in-licensed from third parties and some are held by us. These patents cover key areas of our business, including use of the actinium-225 and other alpha emitting isotopes attached to cancer specific carriers like monoclonal antibodies, methods for manufacturing key components of our drug candidates including actinium-225 alpha emitting radioisotope and carrier antibodies, and methods for manufacturing finished drug candidates for use in cancer treatment. The table below classifies these patents by related family:

Area	Description	US Expiration	US Status	Owner/Licensor
Platform technology	Metastases larger than 1 mm	2019	Issued	MSKCC
Platform technology	Antibody conjugates with DOTA chelators; methods of treating cancer using the same	2021	Issued	MSKCC
Drug preparation methods	Actinium 225 labeling method	2030	Pending	Owned
Drug preparation methods	Bismuth 213 labeling method	2019	Issued	MSKCC
Isotope production methods	Actinium 225 manufacturing in a cyclotron	2026/2027	Issued	Owned
Monoclonal antibody composition and production	Manufacturing of leukemia targeting antibody	2014	Issued	Abbvie

There are no patents covering Iomab™-B; however, we have developed a proprietary strategy based on trade secret protection and orphan drug and data exclusivities. The BC8 antibody, cell line and related know-how has been exclusively licensed by us from the Fred Hutchinson Cancer Research Center (FHCRC) in exchange for milestones, royalties and research support.

The U.S. patent covering the antibody component of Actimab™-A expires in 2014 (all foreign patents have expired). This patent and related technology have been exclusively licensed by us from Abbvie (as successor to Protein Design Labs) for use with alpha-emitting radioistopes in exchange for future development and commercialization milestones, a royalty on net sales for a period of 12.5 years from first commercial sale, a negotiation right to be our clinical and/or commercial antibody supplier, a negotiation right to co-promote Actimab™-A in the U.S. on terms to be negotiated, and the grant-back of IP rights covering improvements to the antibody for use other than with an alpha-emitting isotope. Patents covering actinium-225 conjugated to antibodies have been exclusively licensed by us from Sloan-Kettering Cancer Research Center in exchange for license fees, research support payments, development milestones, royalties on net sales for the term of the licensed patents or, if later, 10 years from first commercial sale, and 15% of any sublicense income we may receive. We are obligated to pay Sloan-Kettering approximately $249,000 in past fees and research support payments through the end of 2014. We source actinium-225 under an agreement with the Oak Ridge National Laboratory that expires at the end of this year. We believe, but cannot guarantee, that we will be able to renew this contract for additional annual periods.

Corporate Information

Our principal executive offices are located at 501 5th Avenue, 3rd Floor, New York, New York 10017. Our telephone number is (732) 243-49495. Our website address is www.actiniumpharma.com. Information accessed through our website is not incorporated into this prospectus and is not a part of this prospectus.

The Offering

Common stock offered by selling stockholders	3,532,239 shares of our common stock (i) underlying outstanding options previously granted under the Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Stock Plan and (ii) granted under the Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Equity Incentive Plan (collectively, the "Plans") to the selling stockholders.
Use of proceeds	We will not receive any proceeds from the sales of these shares. We will receive proceeds to the extent that options to purchase common stock may be issued and thereafter exercised. We will use the exercise proceeds, if any, for working capital and general corporate purposes.
Trading Symbol	ATNM
Risk Factors	The common stock offered hereby involves a high degree of risk and should not be purchased by investors who cannot afford the loss of their entire investment. You should carefully consider the risk factors described in this prospectus in the "Risk Factors" section before making a decision to invest.

RISK FACTORS

An investment in our common stock involves a high degree of risk. You should carefully consider the risks described below, together with all of the other information included in this report, before making an investment decision. If any of the following risks actually occurs, our business, financial condition or results of operations could suffer. In that case, the trading price of our shares of common stock could decline, and you may lose all or part of your investment. You should read the section entitled "Forward-Looking Statements" above for a discussion of what types of statements are forward-looking statements, as well as the significance of such statements in the context of this prospectus.

Risks Related to Our Business

We have generated no revenue from commercial sales to date and our future profitability is uncertain.

We have a limited operating history and our business is subject to all of the risks inherent in the establishment of a new business enterprise. Our likelihood of success must be considered in light of the problems, expenses, difficulties, complications and delays frequently encountered in connection with this development and expansion. Since we began our business, we have focused on research, development and clinical trials of product candidates, and have incurred losses since inception. As of March 31, 2014, we had a deficit accumulated during development stage of approximately $83.2 million. If we continue to incur operating losses and fail to become a profitable company, we may be unable to continue our operations. We expect to continue to operate at a net loss as we continue our research and development efforts, continue to conduct clinical trials and develop manufacturing, sales, marketing and distribution capabilities. There can be no assurance that the products under development by us will be approved for sale in the U.S. or elsewhere. Furthermore, there can be no assurance that if such products are approved they will be successfully commercialized, and the extent of our future losses and the timing of our profitability are highly uncertain.

If we fail to obtain the capital necessary to fund our operations, we will be unable to continue or complete our product development and you will likely lose your entire investment.

We do not currently have sufficient capital for the development and commercialization of our lead product and we will need to continue to seek capital from time to time to continue development of our lead drug candidates and to acquire and develop other product candidates. Our first product is not expected to be commercialized until at least 2017 and we do not expect that the partnering revenues it will generate will be sufficient to fund our ongoing operations. Our cash balance as of March 31, 2014 was $5.9 million. We expect that we will need approximately $7.0 million over the next 12 months to finance research and development and to cover our ongoing working capital needs.

Our business or operations may change in a manner that would consume available funds more rapidly than anticipated and substantial additional funding may be required to maintain operations, fund expansion, develop new or enhanced products, acquire complementary products, business or technologies or otherwise respond to competitive pressures and opportunities, such as a change in the regulatory environment or a change in preferred cancer treatment modalities. However, we may not be able to secure funding when we need it or on favorable terms.

If we cannot raise adequate funds to satisfy our capital requirements, we will have to delay, scale-back or eliminate our research and development activities, clinical studies or future operations. We may also be required to obtain funds through arrangements with collaborators, which arrangements may require us to relinquish rights to certain technologies or products that we otherwise would not consider relinquishing, including rights to future product candidates or certain major geographic markets. We may further have to license our technology to others. This could result in sharing revenues which we might otherwise have retained for ourselves. Any of these actions may harm our business, financial condition and results of operations.

The amount of capital we may need depends on many factors, including the progress, timing and scope of our product development programs; the progress, timing and scope of our preclinical studies and clinical trials; the time and cost necessary to obtain regulatory approvals; the time and cost necessary to further develop manufacturing processes and arrange for contract manufacturing; our ability to enter into and maintain collaborative, licensing and other commercial relationships; and our partners' commitment of time and resources to the development and commercialization of our products.

We have limited access to the capital markets and even if we can raise additional funding, we may be required to do so on terms that are dilutive to you.

We have limited access to the capital markets to raise capital. The capital markets have been unpredictable in the recent past for radio-immunotherapy and other oncology companies and unprofitable companies such as ours. In addition, it is generally difficult for development stage companies to raise capital under current market conditions. The amount of capital that a company such as ours is able to raise often depends on variables that are beyond our control. As a result, we may not be able to secure financing on terms attractive to us, or at all. If we are able to consummate a financing arrangement, the amount raised may not be sufficient to meet our future needs. If adequate funds are not available on acceptable terms, or at all, our business, including our technology licenses, results of operations, financial condition and our continued viability will be materially adversely affected.

If we fail to obtain or maintain necessary U.S. Food and Drug Administration clearances for our radio-immunotherapy products, or if such clearances are delayed, we will be unable to commercially distribute and market our products.

Our products are subject to rigorous regulation by the FDA and numerous other federal, state and foreign governmental authorities. The process of seeking regulatory clearance or approval to market a radio-immunotherapy product is expensive and time-consuming and, notwithstanding the effort and expense incurred, clearance or approval is never guaranteed. If we are not successful in obtaining timely clearance or approval of Company products from the FDA, we may never be able to generate significant revenue and may be forced to cease operations. In particular, the FDA permits commercial distribution of a new radio-immunotherapy product only after the product has received approval of a biologics license application, or BLA, filed with the FDA pursuant to 21 C.F.R. § 314, seeking permission to market the product in interstate commerce in the United States. The BLA process is costly, lengthy and uncertain. Any BLA application filed by us will have to be supported by extensive data, including, but not limited to, technical, preclinical, clinical trial, manufacturing and labeling data, to demonstrate to the FDA's satisfaction the safety and efficacy of the product for its intended use.

Obtaining clearances or approvals from the FDA and from the regulatory agencies in other countries could result in unexpected and significant costs for us and consume management's time and other resources. The FDA and other agencies could ask us to supplement our submissions, collect non-clinical data, conduct additional clinical trials or engage in other time-consuming actions, or it could simply deny our applications. In addition, even if we obtain a BLA approval or pre-market approvals in other countries, the approval could be revoked or other restrictions imposed if post-market data demonstrates safety issues or lack of effectiveness. We cannot predict with certainty how, or when, the FDA will act. If we are unable to obtain the necessary regulatory approvals, our financial condition and cash flow may be materially adversely affected, and our ability to grow domestically and internationally may be limited. Additionally, even if cleared or approved, the Company's products may not be approved for the specific indications that are most necessary or desirable for successful commercialization or profitability.

Our radio-immunotherapy product candidates are in the early stages of development; and we have not demonstrated that any of our products actually cure cancer.

We currently have only two products in clinical development. There is an ongoing physician sponsored Phase 1 AML trial at MSKCC with a single dose of Actimab™-A. We have also commenced a Phase 1/2 multi-center AML trial with fractionated doses of Actimab™-A under its own federal Investigational New Drug Application (IND). Additionally, there are a number of physician IND trials that have been conducted or are currently ongoing at FHCRC with single doses of Iomab™-B.

We cannot predict whether we will encounter problems with any of our ongoing or planned clinical trials that will cause us or regulatory authorities to delay, suspend, or discontinue clinical trials or to delay the analysis of data from ongoing clinical trials. Any of the following could delay or disrupt the clinical development of our product candidates:

- unfavorable results of discussions with the FDA or comparable foreign authorities regarding the scope or design of our clinical trials;
- delays in receiving, or the inability to obtain, required approvals from institutional review boards or other reviewing entities at clinical sites selected for participation in our clinical trials;
- delays in enrolling patients into clinical trials;
- a lower than anticipated retention rate of patients in clinical trials;
- the need to repeat or discontinue clinical trials as a result of inconclusive or negative results or unforeseen complications in testing or because the results of later trials may not confirm positive results from earlier preclinical studies or clinical trials;
- inadequate supply, delays in distribution or deficient quality of, or inability to purchase or manufacture drug product, comparator drugs or other materials necessary to conduct our clinical trials;
- unfavorable FDA or other foreign regulatory inspection and review of a clinical trial site or records of any clinical or preclinical investigation;
- serious and unexpected drug-related side effects experienced by participants in our clinical trials, which may occur even if they were not observed in earlier trials or only observed in a limited number of participants;
- a finding that the trial participants are being exposed to unacceptable health risks;
- the placement by the FDA or a foreign regulatory authority of a clinical hold on a trial; or
- any restrictions on, or post-approval commitments with regard to, any regulatory approval we ultimately obtain that render the product candidate not commercially viable.

We may suspend, or the FDA or other applicable regulatory authorities may require us to suspend, clinical trials of a product candidate at any time if we or they believe the patients participating in such clinical trials, or in independent third party clinical trials for drugs based on similar technologies, are being exposed to unacceptable health risks or for other reasons.

The delay, suspension or discontinuation of any of our clinical trials, or a delay in the analysis of clinical data for our product candidates, for any of the foregoing reasons, could adversely affect our efforts to obtain regulatory approval for and to commercialize our product candidates, increase our operating expenses and have a material adverse effect on our financial results.

In addition, neither we nor any relevant collaborative partner(s) has yet undertaken any clinical assessment or investigation of Company radio-immunotherapy product candidates for other indications, including colon cancer or prostate cancer. Significant further investment may be required to acquire antibody rights and to undertake necessary research and continued development. Further laboratory and specific clinical testing will be required prior to regulatory approval of any product candidates. Adverse or inconclusive results from pre-clinical testing or clinical

trials of product candidates may substantially delay, or halt entirely, any further development of one or more of our products. The projected timetables for continued development of the technologies and related product candidates by us may otherwise be subject to delay or suspension.

Modifications to our product candidates may require federal approvals.

The BLA application is the vehicle through which the company may formally propose that the FDA approve a new pharmaceutical for sale and marketing in the United States Once a particular product candidate receives FDA approval or clearance, expanded uses or uses in new indications of our products may require additional human clinical trials and new regulatory approvals or clearances, including additional IND and BLA submissions and premarket approvals before we can begin clinical development, and/or prior to marketing and sales. If the FDA requires new clearances or approvals for a particular use or indication, we may be required to conduct additional clinical studies, which would require additional expenditures and harm our operating results. If the products are already being used for these new indications, we may also be subject to significant enforcement actions.

Conducting clinical trials and obtaining clearances and approvals can be a time-consuming process, and delays in obtaining required future clearances or approvals could adversely affect our ability to introduce new or enhanced products in a timely manner, which in turn would harm our future growth.

There is no guarantee that the FDA will grant BLA approval of our future product candidates and failure to obtain necessary clearances or approvals for our future product candidates would adversely affect our ability to grow our business.

We have recently commenced a multi-center Phase 1/2 clinical trial for our lead drug candidate, Actimab™-A, in AML and in the future expect to submit a BLA to the FDA for approval of this product. This drug candidate is also the subject of an ongoing human safety trial being conducted under a physician IND at MSKCC. We are in the early stages of evaluating other drug candidates consisting of conjugates of Ac-225 with human or humanized antibodies for pre-clinical and clinical development in other types of cancer. In June 2012, we acquired rights to Iomab™, a Phase 2 clinical stage monoclonal antibody with safety and efficacy data in more than 250 patients in need of HSCT. Product candidates utilizing this antibody would also require FDA approval of a BLA. The FDA may not approve or clear these products for the indications that are necessary or desirable for successful commercialization. Indeed, the FDA may refuse our requests for BLA market approval of new products, new intended uses or indications to existing or future product candidates. Failure to receive approval for our new products would have an adverse effect on our ability to expand our business.

Clinical trials necessary to support BLA approval of our future product candidates will be time consuming and expensive. Delays or failures in our clinical trials will prevent us from commercializing our product candidates and will adversely affect our business, operating results and prospects and could cause us to cease operations.

Initiating and completing clinical trials necessary to support BLA approval of Actimab™-A and other product candidates, will be time-consuming and expensive and the outcome uncertain. Moreover, the results of early clinical trials are not necessarily predictive of future results, and any product candidate we advance into clinical trials may not have favorable results in later clinical trials. We have worked with the FDA to develop a clinical trial designed to support initial safety and efficacy of Actimab™-A and on October 6, 2008, and January 5, 2009, we submitted IND amendments to the FDA for the conduct of a multi-center Phase 1/2 clinical trial for treatment of AML. The trial is now underway with the purpose of examining the use of Actimab™-A in AML patients who are not eligible for approved forms of treatment with curative intent. The trial is not designed to support final BLA approval of the product candidate and one or more additional trials will have to be conducted in the future before we file a BLA. In addition, there can be no assurance that the data generated during the trial will meet our chosen safety and effectiveness endpoints or otherwise produce results that will eventually support the filing or approval of a BLA.

The issued patents, which are licensed by us for the HuM-195 antibody, our acute myeloid leukemia targeting antibody, will begin to expire before we have commercialized Actimab™-A.

The humanized antibody which we use in the conjugated Actimab™-A product candidate is covered by the claims of issued patents that we license from Facet Biotech Corporation, a wholly-owned subsidiary of Abbott Laboratories ("Facet"). Some of those patents expired in 2013 and the last patent will expire in 2014. After these patents expire, others may be eventually able to use an antibody with the same sequence, and we will then need to rely on additional patent protection covering alpha particle drug products comprising actinium 225. Any competing product based on the HuM-195 antibody is likely to require several years of development before achieving our product candidate's current status and may be subject to significant regulatory hurdles, but is nevertheless a possibility that can affect the Company's business in the future.

Additionally, because we expect that certain of these patents will expire prior to commercialization of Actimab™-A, we expect that in order to attract a commercialization partner for that product candidate, we may need to reach an agreement with Facet to reduce the milestone payments and royalties currently required to be paid under our license agreement for HuM-195. There can be no assurance that the parties will be able to agree on an amendment to the terms of the license. Failure to reach such an agreement could materially adversely affect our ability to find a commercialization partner for Actimab™-A which may materially harm our business.

Iomab™-B is not patent protected.

Neither the antibody portion nor the composition of matter as a whole for the conjugated Iomab™ product candidate is covered by the claims of any issued or pending patents. Accordingly, there are no patents that would prevent others from using an antibody with the same antibody sequence in any drug product (e.g., those comprising iodine 131 or alpha particle emitters). Any competing product based on the antibody used in Iomab-B™ is likely to require several years of development before achieving our product candidate's current status and may be subject to significant regulatory hurdles, but is nevertheless a possibility that could negatively impact the Company's business in the future.

We may be unable to obtain a sufficient supply of Ac-225 medical grade isotope in order to continue clinical trials and to allow for the manufacture of commercial quantities of Actimab™-A

There are limited quantities of Ac-225 available today. The existing supplier of Ac-225 to us is ORNL. It manufactures Ac-225 by eluting it from its supply of Thorium-229. Although this has proven to be a very reliable source of production for a number of years, it is limited by the quantity of Thorium-229 at ORNL. We believe that the current approximate maximum of Ac-225 production from this source is sufficient for approximately 1,000 - 2,000 patient treatments per year. Since our needs are significantly below that amount at this time, and will continue to be below that for as long as we do not have a commercial product with a potential of selling more than 2,000 patient doses per year, we believe that this supply will be sufficient for completion of clinical trials and early commercialization. To secure supplies beyond this amount, we have developed what we believe to be a scalable cost-effective process for manufacturing Ac-225 in a cyclotron at an estimated cost in excess of $5 million. This work has been conducted at Technical University Munich (TUM) in Germany. We are now in possession of detailed descriptions of all the developed manufacturing procedures and has rights to all relevant patent applications and other intellectual property. However, we do not currently have access to a commercial cyclotron capable of producing medical grade Ac-225. Although beam time on such cyclotrons is commercially available, we do not currently have a relationship with any entity that owns or controls a suitable cyclotron. It has identified possible sources and estimates that it could secure the necessary beam time when needed at a cost of approximately $2 million per year. Our contract for supply of this isotope from ORNL extends through the end of 2014. While we expect this contract can be renewed at the end of its term, there can be no assurance that ORNL will decide to renew the contract or that the United States Department of Energy will not change its policies that allow for the sale of isotope to the Company. Failure to acquire sufficient quantities of medical grade Ac-225 would make it impossible to effectively complete clinical trials and to commercialize Actimab™-A and would materially harm our business.

Conducting successful clinical studies may require the enrollment of large numbers of patients, and suitable patients may be difficult to identify and recruit.

Patient enrollment in clinical trials and completion of patient participation and follow-up depends on many factors, including the size of the patient population; the nature of the trial protocol; the attractiveness of, or the discomforts and risks associated with, the treatments received by enrolled subjects; the availability of appropriate clinical trial investigators; support staff; and proximity of patients to clinical sites and ability to comply with the eligibility and exclusion criteria for participation in the clinical trial and patient compliance. For example, patients may be discouraged from enrolling in our clinical trials if the trial protocol requires them to undergo extensive post-treatment

procedures or follow-up to assess the safety and effectiveness of our product candidates or if they determine that the treatments received under the trial protocols are not attractive or involve unacceptable risks or discomforts. Patients may also not participate in our clinical trials if they choose to participate in contemporaneous clinical trials of competitive product candidates. In addition, patients participating in refractory AML clinical trials are seriously and often terminally ill and therefore may not complete the clinical trial due to reasons including comorbid conditions or occurrence of adverse medical events related or unrelated to the investigational products, or death.

Development of sufficient and appropriate clinical protocols to demonstrate safety and efficacy are required and we may not adequately develop such protocols to support clearance and approval.

The FDA may require us to submit data on a greater number of patients than we originally anticipated and/or for a longer follow-up period or change the data collection requirements or data analysis applicable to our clinical trials. They may also require additional data on certain categories of patients, should it emerge during the conduct of our clinical trials that certain categories of patients are likely to be affected in different and/or additional manner than most of the patients. In addition to FDA requirements, our clinical trial requires the approval of the institutional review board, or IRB, at each site selected for participation in our current Actimab™-A clinical trial. We have submitted our clinical trial to the IRBs at participating sites for approval and we have thus far obtained approval from five IRBs. Our clinical trial protocols have not been rejected by any IRB.

Additional delays to the completion of clinical studies may result from modifications being made to the protocol during the clinical trial, if such modifications are warranted and/or required by the occurrences in the given trial.

Each such modification has to be submitted to the FDA. This could result in the delay or halt of a clinical trial while the modification is evaluated. In addition, depending on the quantity and nature of the changes made, FDA could take the position that some or all of the data generated by the clinical trial is not usable because the same protocol was not used throughout the trial. This might require the enrollment of additional subjects, which could result in the extension of the clinical trial and the FDA delaying clearance or approval of a product candidate.

There can be no assurance that the data generated using modified protocols will be acceptable to FDA.

There can be no assurance that the data generated using modified protocols will be acceptable to FDA or that if future modifications during the trial are necessary, that any such modifications will be acceptable to FDA. If the FDA believes that its prior approval is required for a particular modification, it can delay or halt a clinical trial while it evaluates additional information regarding the change.

Serious injury or death resulting from a failure of one of our drug candidates during current or future clinical trials could also result in the FDA delaying our clinical trials or denying or delaying clearance or approval of a product.

The ongoing Phase 1 clinical trial for Actimab™-A conducted at MSKCC was designed to establish the maximum tolerated dose of the product. As the Company expected, patients receiving highest dose of the drug administered in the trial so far had prolonged bone marrow suppression which could lead to fatal infections and other severe consequences. Consequently, the dose levels of our drug in that trial were reduced as we continue our work on establishing maximum tolerated dose.

Even though an adverse event may not be the result of the failure of our drug candidate, FDA or an IRB could delay or halt a clinical trial for an indefinite period of time while an adverse event is reviewed, and likely would do so in the event of multiple such events.

Any delay or termination of our current or future clinical trials as a result of the risks summarized above, including delays in obtaining or maintaining required approvals from IRBs, delays in patient enrollment, the failure of patients to continue to participate in a clinical trial, and delays or termination of clinical trials as a result of protocol modifications or adverse events during the trials, may cause an increase in costs and delays in the filing of any submissions with the FDA, delay the approval and commercialization of our product candidates or result in the failure of the clinical trial, which could adversely affect our business, operating results and prospects. Lengthy delays in the completion of our Actimab™-A clinical trials would adversely affect our business and prospects and could cause us to cease operations.

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If the third parties on which we rely to conduct our clinical trials and to assist us with pre-clinical development do not perform as contractually required or expected, we may not be able to obtain regulatory approval for or commercialize our product candidates.

We do not have the ability to independently conduct our pre-clinical and clinical trials for our product candidates and we must rely on third parties, such as contract research organizations, medical institutions, clinical investigators and contract laboratories to conduct such trials. If these third parties do not successfully carry out their contractual duties or regulatory obligations or meet expected deadlines, if these third parties need to be replaced, or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our pre-clinical development activities or clinical trials may be extended, delayed, suspended or terminated, and we may not be able to obtain regulatory approval for, or successfully commercialize, our product candidates on a timely basis, if at all, and our business, operating results and prospects may be adversely affected. Furthermore, our third-party clinical trial investigators may be delayed in conducting our clinical trials for reasons outside of their control.

The future results of our current or future clinical trials may not support our product candidate claims or may result in the discovery of unexpected adverse side effects.

Even if our clinical trials are completed as planned, we cannot be certain that their results will support our product candidate claims or that the FDA or foreign authorities will agree with our conclusions regarding them. Success in pre-clinical studies and early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the later trials will replicate the results of prior trials and pre-clinical studies. The clinical trial process may fail to demonstrate that our product candidates are safe and effective for the proposed indicated uses. If FDA concludes that the clinical trials for Actimab™-A, or any other product candidate for which we might seek clearance, have failed to demonstrate safety and effectiveness, we would not receive FDA clearance to market that product candidate in the United States for the indications sought. In addition, such an outcome could cause us to abandon the product candidate and might delay development of others. Any delay or termination of our clinical trials will delay the filing of any submissions with the FDA and, ultimately, our ability to commercialize our product candidates and generate revenues. It is also possible that patients enrolled in clinical trials will experience adverse side effects that are not currently part of a product candidate's profile. In addition, our clinical trials for Actimab™-A involve a relatively small patient population. Because of the small sample size, their results may not be indicative of future results.

Actimab™-A and future product candidates may never achieve market acceptance.

Actimab™-A and future product candidates that we may develop may never gain market acceptance among physicians, patients and the medical community. The degree of market acceptance of any of product will depend on a number of factors, including the actual and perceived effectiveness and reliability of the product; the results of any long–term clinical trials relating to use of the product; the availability, relative cost and perceived advantages and disadvantages of alternative technologies; the degree to which treatments using the product are approved for reimbursement by public and private insurers; the strength of our marketing and distribution infrastructure; and the level of education and awareness among physicians and hospitals concerning the product.

Failure of Actimab™-A or any of our other product candidates to significantly penetrate current or new markets would negatively impact our business financial condition and results of operations.

To be commercially successful, physicians must be persuaded that using our product candidates for treatment of AML and other cancers are effective alternatives to existing therapies and treatments.

We believe that oncologists and other physicians will not widely adopt a product candidate unless they determine, based on experience, clinical data, and published peer-reviewed journal articles, that the use of that product candidate provides an effective alternative to other means of treating specific cancers. Patient studies or clinical experience may indicate that treatment with our product candidates does not provide patients with sufficient benefits in extension of life or quality of life. We believe that recommendations and support for the use of each product candidate from influential physicians will be essential for widespread market acceptance. Our product candidates are still in the development stage and it is premature to attempt to gain support from physicians at this time. We can provide no assurance that such support will ever be obtained. If our product candidates do not receive such support from these physicians and from long-term data, physicians may not use or continue to use, and hospitals may not purchase or continue to purchase, them.

Even if our product candidates are approved by regulatory authorities, if we or our suppliers fail to comply with ongoing FDA regulation or if we experience unanticipated problems with our products, these products could be subject to restrictions or withdrawal from the market.

Any product candidate for which we obtain FDA clearance or approval, and the manufacturing processes, reporting requirements, post-approval clinical data and promotional activities for such product candidate, will be subject to continued regulatory review, oversight and periodic inspections by the FDA. In particular, we and our suppliers are required to comply with FDA's Quality System Regulations, or QSR, and International Standards Organization, or ISO, regulations for the manufacture of products and other regulations which cover the methods and documentation of the design, testing, production, control, quality assurance, labeling, packaging, storage and shipping of any product candidate for which we obtain clearance or approval. Additionally, because our product candidates include radio-active isotopes, they will be subject to additional regulation and oversight from the United States Nuclear Regulatory Commission (NRC) and similar bodies in other jurisdictions. Regulatory bodies, such as the FDA, enforce these regulations through periodic inspections. The failure by us or one of our suppliers to comply with applicable statutes and regulations administered by the FDA and other regulatory bodies, or the failure to timely and adequately respond to any adverse inspectional observations or safety issues, could result in, among other things, enforcement actions by the FDA and/or other regulatory bodies.

If any of these actions were to occur, it would harm our reputation and cause our future product sales and profitability to suffer and may prevent us from generating revenue. Furthermore, our key component suppliers may not currently be or may not continue to be in compliance with all applicable regulatory requirements which could result in our failure to produce our product candidates on a timely basis and in the required quantities, if at all.

Even if regulatory clearance or approval of a product candidate is granted, such clearance or approval may be subject to limitations on the intended uses for which a product may be marketed and reduce the potential to successfully commercialize that product and generate revenue from that product. If the FDA determines that the product promotional materials, labeling, training or other marketing or educational activities constitute promotion of an unapproved use, it could request that we or our commercialization partners cease or modify our training or promotional materials or subject us to regulatory enforcement actions. It is also possible that other federal, state or foreign enforcement authorities might take action if they consider such training or other promotional materials to constitute promotion of an unapproved use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false claims for reimbursement.

In addition, we may be required to conduct costly post-market testing and surveillance to monitor the safety or effectiveness of our products, and we must comply with adverse event and pharmacovigilance reporting requirements, including the reporting of adverse events which occur in connection with, and whether or not directly related to, our products. Later discovery of previously unknown problems with our products, including unanticipated adverse events or adverse events of unanticipated severity or frequency, manufacturing problems, or failure to comply with regulatory requirements, may result in changes to labeling, restrictions on such products or manufacturing processes, withdrawal of the products from the market, voluntary or mandatory recalls, a requirement to recall, replace or refund the cost of any product we manufacture or distribute, fines, suspension of regulatory approvals, product seizures, injunctions or the imposition of civil or criminal penalties which would adversely affect our business, operating results and prospects.

Our revenue stream will depend upon third party reimbursement.

The commercial success of our product candidates in both domestic and international markets will be substantially dependent on whether third-party coverage and reimbursement is available for patients that use our products. However, the availability of insurance coverage and reimbursement for newly approved cancer therapies is

uncertain, and therefore, third-party coverage may be particularly difficult to obtain even if our products are approved by the FDA as safe and efficacious. Patients using existing approved therapies are generally reimbursed all or part of the product cost by Medicare or other third-party payors. Medicare, Medicaid, health maintenance organizations and other third-party payors are increasingly attempting to contain healthcare costs by limiting both coverage and the level of reimbursement of new drugs, and, as a result, they may not cover or provide adequate payment for these products. Submission of applications for reimbursement approval generally does not occur prior to the filing of an BLA for that product and may not be granted until many months after BLA approval. In order to obtain reimbursement arrangements for these products, we or our commercialization partners may have to agree to a net sales price lower than the net sales price we might charge in other sales channels. The continuing efforts of government and third-party payors to contain or reduce the costs of healthcare may limit our revenue. Initial dependence on the commercial success of our products may make our revenues particularly susceptible to any cost containment or reduction efforts.

We are dependent on third parties for manufacturing and marketing of our proposed proprietary products. If we are not able to secure favorable arrangements with such third parties, our business and financial condition would be harmed.

We will not manufacture any of our proposed proprietary products for commercial sale nor do we have the resources necessary to do so. In addition, we currently do not have the capability to market drug products ourselves. We intend to contract with specialized manufacturing companies to manufacture our proposed proprietary products and partner with larger pharmaceutical companies for their commercialization. In connection with our efforts to commercialize our proposed proprietary products, we will seek to secure favorable arrangements with third parties to distribute, promote, market and sell them. If we are not able to secure favorable commercial terms or arrangements with third parties for distribution, marketing, promotion and sales of our proposed proprietary products, we may have to retain promotional and marketing rights and seek to develop the commercial resources necessary to promote or co-promote or co-market certain or all of our proprietary product candidates to the appropriate channels of distribution in order to reach the specific medical market that we are targeting. We may not be able to enter into any partnering arrangements on this or any other basis. If we are not able to secure favorable partnering arrangements, or are unable to develop the appropriate resources necessary for the commercialization of our proposed proprietary products, our business and financial condition could be harmed. In addition, we will have to hire additional employees or consultants, since our current employees have limited experience in these areas. Sufficient employees with relevant skills may not be available to us. Any increase in the number of our employees would increase our expense level, and could have an adverse effect on our financial position.

In addition, we, or our potential commercial partners, may not successfully introduce our proposed proprietary products or they may not achieve acceptance by patients, health care providers and insurance companies. Further, it is possible that we may not be able to secure arrangements to manufacture, market, distribute, promote and sell our proposed proprietary products at favorable commercial terms that would permit us to make a profit. To the extent that corporate partners conduct clinical trials, we may not be able to control the design and conduct of these clinical trials.

We may have conflicts with our partners that could delay or prevent the development or commercialization of our product candidates.

We may have conflicts with our partners, such as conflicts concerning the interpretation of preclinical or clinical data, the achievement of milestones, the interpretation of contractual obligations, payments for services, development obligations or the ownership of intellectual property developed during our collaboration. If any conflicts arise with any of our partners, such partner may act in a manner that is adverse to our best interests. Any such disagreement could result in one or more of the following, each of which could delay or prevent the development or commercialization of our product candidates, and in turn prevent us from generating revenues: unwillingness on the part of a partner to pay us milestone payments or royalties we believe are due under a collaboration; uncertainty regarding ownership of intellectual property rights arising from our collaborative activities, which could prevent us from entering into additional collaborations; unwillingness by the partner to cooperate in the development or manufacture of the product, including providing us with product data or materials; unwillingness on the part of a partner to keep us informed regarding the progress of its development and commercialization activities or to permit public disclosure of the results of those activities; initiating litigation or alternative dispute resolution options by either party to resolve the dispute; or attempts by either party to terminate the agreement.

Upon commercialization of our product candidates, we may be dependent on third parties to market, distribute and sell them.

Our ability to receive revenues may be dependent upon the sales and marketing efforts of any future co-marketing partners and third-party distributors. At this time, we have not entered into an agreement with any commercialization partner and only plan to do so after the successful completion of Phase 2 clinical trials and prior to commercialization. If we fail to reach an agreement with any commercialization partner, or if upon reaching such an agreement that partner fails to sell a large volume of our products, it may have a negative impact on our business, financial condition and results of operations.

Our product candidates will face significant competition in the markets for them, and if they are unable to compete successfully, our business will suffer.

Our product candidates face, and will continue to face, intense competition from large pharmaceutical companies, as well as academic and research institutions. We compete in an industry that is characterized by (i) rapid technological change, (ii) evolving industry standards, (iii) emerging competition and (iv) new product introductions. Our competitors have existing products and technologies that will compete with our product candidates and technologies and may develop and commercialize additional products and technologies that will compete with our product candidates and technologies. Because several competing companies and institutions have greater financial resources than us, they may be able to (i) provide broader services and product lines, (ii) make greater investments in research and development, or R&D, and (iii) carry on broader R&D initiatives. Our competitors also have greater development capabilities than we do and have substantially greater experience in undertaking preclinical and clinical testing of product candidates, obtaining regulatory approvals, and manufacturing and marketing pharmaceutical products. They also have greater name recognition and better access to customers than us. Our chief competitors include companies such as Algeta ASA, Bayer Schering Pharma AG, GlaxoSmithKline Plc and Spectrum Pharmaceuticals, Inc. and others.

Adverse events involving our products may lead the FDA to delay or deny clearance for our product candidates or result in product recalls that could harm our reputation, business and financial results.

Once a product candidate receives FDA clearance or approval, the agency has the authority to require the recall of commercialized products in the event of adverse side effects, material deficiencies or defects in design or manufacture. The authority to require a recall must be based on an FDA finding that there is a reasonable probability that the device would cause serious injury or death. Manufacturers may, under their own initiative, recall a product if any material deficiency in a product is found. A government-mandated or voluntary recall by us or one of our distributors could occur as a result of adverse side effects, impurities or other product contamination, manufacturing errors, design or labeling defects or other deficiencies and issues. Recalls of any of our products would divert managerial and financial resources and have an adverse effect on our financial condition and results of operations. The FDA requires that certain classifications of recalls be reported to FDA within 10 working days after the recall is initiated. Companies are required to maintain certain records of recalls, even if they are not reportable to the FDA. We may initiate voluntary recalls involving our products in the future that we determine do not require notification of the FDA. If the FDA disagrees with our determinations, they could require us to report those actions as recalls. A future recall announcement could harm our reputation with customers and negatively affect our sales. In addition, the FDA could take enforcement action for failing to report the recalls when they were conducted.

Our business depends upon securing and protecting critical intellectual property.

Our commercial success will depend in part on our obtaining and maintaining patent, trade secret, copyright and trademark protection of our technologies in the United States and other jurisdictions, as well as successfully enforcing

this intellectual property and defending this intellectual property against third-party challenges. We will only be able to protect our technologies from unauthorized use by third parties to the extent that valid and enforceable intellectual property protection, such as patents or trade secrets law, cover them. In particular, we place considerable emphasis on obtaining patent and trade secret protection for significant new technologies, products and processes. Furthermore, the degree of future protection of our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. Moreover, the degree of future protection of our proprietary rights is uncertain for product candidates that are currently in the early stages of development because we cannot predict which of these product candidates will ultimately reach the commercial market or whether the commercial versions of these product candidates will incorporate proprietary technologies.

Our patent position is highly uncertain and involves complex legal and factual questions.

Accordingly, we cannot predict the breadth of claims that may be allowed or enforced under our patents or in third-party patents. For example, we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and issued patents; we or our licensors might not have been the first to file patent applications for these inventions; others may independently develop similar or alternative technologies or duplicate any of our technologies; it is possible that none of our pending patent applications or the pending patent applications of our licensors will result in issued patents; our issued patents and issued patents of our licensors may not provide a basis for commercially viable technologies, or may not provide us with any competitive advantages, or may be challenged and invalidated by third parties; and, we may not develop additional proprietary technologies that are patentable.

As a result, our owned and licensed patents may not be valid and we may not be able to obtain and enforce patents and to maintain trade secret protection for the full commercial extent of our technology. The extent to which we are unable to do so could materially harm our business.

We or our licensors have applied for and will continue to apply for patents for certain products. Such applications may not result in the issuance of any patents, and any patents now held or that may be issued may not provide us with adequate protection from competition. Furthermore, it is possible that patents issued or licensed to us may be challenged successfully. In that event, if we have a preferred competitive position because of such patents, such preferred position would be lost. If we are unable to secure or to continue to maintain a preferred position, we could become subject to competition from the sale of generic products. Failure to receive, inability to protect, or expiration of our patents for medical use, manufacture, conjugation and labeling of Ac-225, the antibodies that we license from third parties, or subsequent related filings, would adversely affect our business and operations.

Patents issued or licensed to us may be infringed by the products or processes of others. The cost of enforcing our patent rights against infringers, if such enforcement is required, could be significant, and the Company does not currently have the financial resources to fund such litigation. Further, such litigation can go on for years and the time demands could interfere with our normal operations. There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical industry. We may become a party to patent litigation and other proceedings. The cost to us of any patent litigation, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation more effectively than we can because of their substantially greater financial resources. Litigation may also absorb significant management time.

Unpatented trade secrets, improvements, confidential know-how and continuing technological innovation are important to our scientific and commercial success. Although we attempt to and will continue to attempt to protect our proprietary information through reliance on trade secret laws and the use of confidentiality agreements with our partners, collaborators, employees and consultants and other appropriate means, these measures may not effectively prevent disclosure of our proprietary information, and, in any event, others may develop independently, or obtain access to, the same or similar information.

Certain of our patent rights are licensed to us by third parties. If we fail to comply with the terms of these license agreements, our rights to those patents may be terminated, and we will be unable to conduct our business.

If we are found to be infringing on patents or trade secrets owned by others, we may be forced to cease or alter our product development efforts, obtain a license to continue the development or sale of our products, and/or pay damages.

Our manufacturing processes and potential products may violate proprietary rights of patents that have been or may be granted to competitors, universities or others, or the trade secrets of those persons and entities. As the pharmaceutical industry expands and more patents are issued, the risk increases that our processes and potential products may give rise to claims that they infringe the patents or trade secrets of others. These other persons could bring legal actions against us claiming damages and seeking to enjoin clinical testing, manufacturing and marketing of the affected product or process. If any of these actions are successful, in addition to any potential liability for damages, we could be required to obtain a license in order to continue to conduct clinical tests, manufacture or market the affected product or use the affected process. Required licenses may not be available on acceptable terms, if at all, and the results of litigation are uncertain. If we become involved in litigation or other proceedings, it could consume a substantial portion of our financial resources and the efforts of our personnel.

Our ability to protect and enforce our patents does not guarantee that we will secure the right to commercialize our patents.

A patent is a limited monopoly right conferred upon an inventor, and his successors in title, in return for the making and disclosing of a new and non-obvious invention. This monopoly is of limited duration but, while in force, allows the patent holder to prevent others from making and/or using its invention. While a patent gives the holder this right to exclude others, it is not a license to commercialize the invention where other permissions may be required for commercialization to occur. For example, a drug cannot be marketed without the appropriate authorization from the FDA, regardless of the existence of a patent covering the product. Further, the invention, even if patented itself, cannot be commercialized if it infringes the valid patent rights of another party.

We rely on confidentiality agreements to protect our trade secrets. If these agreements are breached by our employees or other parties, our trade secrets may become known to our competitors.

We rely on trade secrets that we seek to protect through confidentiality agreements with our employees and other parties. If these agreements are breached, our competitors may obtain and use our trade secrets to gain a competitive advantage over us. We may not have any remedies against our competitors and any remedies that may be available to us may not be adequate to protect our business or compensate us for the damaging disclosure. In addition, we may have to expend resources to protect our interests from possible infringement by others.

The use of hazardous materials, including radioactive and biological materials, in our research and development efforts imposes certain compliance costs on us and may subject us to liability for claims arising from the use or misuse of these materials.

Our research, development and manufacturing activities involves the controlled use of hazardous materials, including chemicals, radioactive and biological materials, such as radioactive isotopes. We are subject to federal, state, local and foreign environmental laws and regulations governing, among other matters, the handling, storage, use and disposal of these materials and some waste products. We cannot completely eliminate the risk of contamination or injury from these materials and we could be held liable for any damages that result, which could exceed our financial resources. We currently maintain insurance coverage for injuries resulting from the hazardous materials we use; however, future claims may exceed the amount of our coverage. Also, we do not have insurance coverage for pollution cleanup and removal. Currently the costs of complying with such federal, state, local and foreign environmental regulations are not significant, and consist primarily of waste disposal expenses. However, they could become expensive, and current or future environmental laws or regulations may impair our research, development, production and commercialization efforts.

We may undertake international operations, which will subject us to risks inherent with operations outside of the United States.

Although we do not have any foreign operations at this time, we intend to seek market clearances in foreign markets that we believe will generate significant opportunities. However, even with the cooperating of a commercialization partner, conducting drug development in foreign countries involves inherent risks, including, but not limited to difficulties in staffing, funding and managing foreign operations; unexpected changes in regulatory requirements; export restrictions; tariffs and other trade barriers; difficulties in protecting, acquiring, enforcing and litigating intellectual property rights; fluctuations in currency exchange rates; and potentially adverse tax consequences.

If we were to experience any of the difficulties listed above, or any other difficulties, any international development activities and our overall financial condition may suffer and cause us to reduce or discontinue our international development and registration efforts.

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We may not be successful in hiring and retaining key employees.

Our future operations and successes depend in large part upon the continued service of key members of our senior management team whom we are highly dependent upon to manage our business. If any member of our current senior management terminates his or her employment with us, such a departure may have a material adverse effect on our business.

Our future success also depends on our ability to identify, attract, hire or engage, retain and motivate other well-qualified managerial, technical, clinical and regulatory personnel. There can be no assurance that such professionals will be available in the market, or that we will be able to retain existing professionals or meet or continue to meet their compensation requirements. Furthermore, the cost base in relation to such compensation, which may include equity compensation, may increase significantly, which could have a material adverse effect on us. Failure to establish and maintain an effective management team and work force could adversely affect our ability to operate, grow and manage our business.

We do not yet know what the consequences of the Patient Protection and Affordable Care Act may be on our business.

In March 2010, President Obama signed the Patient Protection and Affordable Care Act ("PPACA"), which makes changes that are expected to significantly impact the pharmaceutical industries. One of the principal aims of the PPACA as currently enacted is to expand health insurance coverage to approximately 32 million Americans who are currently uninsured. The consequences of this significant coverage expansion on the sales of our products, once they are developed, are unknown and speculative at this point.

The PPACA contains a number of provisions designed to generate the revenues necessary to fund the coverage expansions among other things. This includes new fees or taxes on certain health-related industries.

The PPACA provisions on comparative clinical effectiveness research extend the initiatives of the American Recovery and Reinvestment Act of 2009, also known as the stimulus package, which included $1.1 billion in funding to study the comparative effectiveness of health care treatments and strategies. This stimulus funding was designated for, among other things, conducting, supporting or synthesizing research that compares and evaluates the risks and benefits, clinical outcomes, effectiveness and appropriateness of products. The PPACA appropriates additional funding to comparative clinical effectiveness research. Although Congress has indicated that this funding is intended to improve the quality of health care, it remains unclear how the research will impact current Medicare coverage and reimbursement or how new information will influence other third-party payor policies.

In addition, other legislative changes have been proposed and adopted since the PPACA was enacted. Most recently, on August 2, 2011, the President Obama signed into law the Budget Control Act of 2011, which, among other things, creates the Joint Select Committee on Deficit Reduction to recommend proposals in spending reductions to Congress. The Joint Select Committee did not achieve a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, which threatened to trigger the legislation's automatic reduction to several government programs, including aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, starting in 2013. Congress passed and President Obama signed, however, the American Taxpayer Relief Act of 2012 which delays these required cuts for one year. We expect that the PPACA, as well as other federal or state health care reform measures that may be adopted in the future, could have a material adverse effect on our industry generally and our ability to successfully commercialize our products or could limit or eliminate our spending on certain development projects. The taxes imposed by the PPACA and the expansion in the government's role in the U.S. healthcare industry may result in decreased profits to us, lower reimbursement by payors for our products, and/or reduced medical procedure volumes, all of which may adversely affect our business, financial condition and results of operations.

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Managing our growth as we expand operations may strain our resources.

We expect to need to grow rapidly in order to support additional, larger, and potentially international, pivotal clinical trials of our drug candidates, which will place a significant strain on our financial, managerial and operational resources. In order to achieve and manage growth effectively, we must continue to improve and expand our operational and financial management capabilities. Moreover, we will need to increase staffing and to train, motivate and manage our employees. All of these activities will increase our expenses and may require us to raise additional capital sooner than expected. Failure to manage growth effectively could materially harm our business, financial condition or results of operations.

We may expand our business through the acquisition of rights to new product candidates that could disrupt our business, harm our financial condition and may also dilute current stockholders' ownership interests in our company.

Our business strategy includes expanding our products and capabilities, and we may seek acquisitions of drug candidates, antibodies or technologies to do so. Acquisitions involve numerous risks, including substantial cash expenditures; potentially dilutive issuance of equity securities; incurrence of debt and contingent liabilities, some of which may be difficult or impossible to identify at the time of acquisition; difficulties in assimilating acquired technologies or the operations of the acquired companies; diverting our management's attention away from other business concerns; risks of entering markets in which we have limited or no direct experience; and the potential loss of our key employees or key employees of the acquired companies.

We can make no assurances that any acquisition will result in short-term or long-term benefits to us. We may incorrectly judge the value or worth of an acquired product, company or business. In addition, our future success would depend in part on our ability to manage the rapid growth associated with some of these acquisitions. We cannot assure that we will be able to make the combination of our business with that of acquired products, businesses or companies work or be successful. Furthermore, the development or expansion of our business or any acquired products, business or companies may require a substantial capital investment by us. We may not have these necessary funds or they might not be available to us on acceptable terms or at all. We may also seek to raise funds by selling shares of our preferred or common stock, which could dilute each current stockholder's ownership interest in the Company.

Risks Related to Ownership of Our Common Stock

Because we became public by means of a "reverse merger," we may not be able to attract the attention of major brokerage firms.

Additional risks may exist since we became public through a "reverse merger." Securities analysts of major brokerage firms may not provide coverage of us since there is little incentive to brokerage firms to recommend the purchase of our common stock. We cannot assure you that brokerage firms will want to conduct any secondary offerings on behalf of our company in the future.

The sale of securities by us in any equity or debt financing could result in dilution to our existing stockholders and have a material adverse effect on our earnings.

We believe we need up to $25 million in cash to finance research and development and to cover our ongoing working capital needs through 2016, and we have not completed efforts to establish a stable recurring source of revenues sufficient to cover our operating costs for the next twelve months, We have financed our operations primarily through sales of stock and the issuance of convertible promissory notes. It is likely that during the next twelve months we will seek to raise capital through the sales of stock and/or issuance of convertible promissory notes in order to expand our

level of operations to continue our research and development efforts.

Any sale of common stock by us in a future private placement offering could result in dilution to the existing stockholders as a direct result of our issuance of additional shares of our capital stock. In addition, our business strategy may include expansion through internal growth, by acquiring subscribers email lists, or by establishing strategic relationships with targeted customers and vendor. In order to do so, or to finance the cost of our other activities, we may issue additional equity securities that could dilute our stockholders' stock ownership. We may also assume additional debt and incur impairment losses related to goodwill and other tangible assets if we acquire another company and this could negatively impact our earnings and results of operations.

Future sales of our common stock in the public market could lower the price of our common stock and impair our ability to raise funds in future securities offerings.

Future sales of a substantial number of shares of our common stock in the public market, or the perception that such sales may occur, could adversely affect the then prevailing market price of our common stock and could make it more difficult for us to raise funds in the future through a public offering of our securities. We believe we need up to $25 million in cash to finance research and development and to cover our ongoing working capital needs through 2016, and we have not completed efforts to establish a stable recurring source of revenues sufficient to cover our operating costs for the next twelve months, We have financed our operations primarily through sales of stock and the issuance of convertible promissory notes. It is likely that during the next twelve months we will to continue to finance our operations through sales of stock and/or issuance of convertible promissory notes.

Our common stock is extremely thinly traded, so you may be unable to sell at or near asking prices or at all if you need to sell your shares to raise money or otherwise desire to liquidate your shares.

Trading volume in our common stock is limited. This may inhibit investment by major institutional investment funds, including mutual funds, as well as individual investors. A higher volume trading market may never develop or be maintained. Active trading markets generally result in lower price volatility and more efficient execution of buy and sell orders. Absence of an active trading market reduces the liquidity of the shares traded there.

Our Common Stock is subject to price volatility unrelated to our operations.

The trading volume of our common stock has been and may continue to be extremely limited and sporadic. As a result of such trading activity, the quoted price for our common stock on the NYSE MKT may not necessarily be a reliable indicator of its fair market value.

We expect the market price of our Common Stock to fluctuate substantially due to a variety of factors, including market perception of our ability to achieve our planned growth, quarterly operating results of other companies in the same industry, trading volume in our common stock, changes in general conditions in the economy and the financial markets or other developments affecting the Company’s competitors or the Company itself. This volatility has had a significant effect on the market price of securities issued by many companies for reasons unrelated to their operating performance and could have the same effect on our common stock.

Because we do not intend to pay dividends, stockholders will benefit from an investment in our Common Stock only if it appreciates in value.

We have never declared or paid any cash dividends on our Preferred Stock or Common Stock. For the foreseeable future, it is expected that earnings, if any, generated from our operations will be used to finance the growth of our business, and that no dividends will be paid to holders of our Preferred Stock or Common Stock. As a result, the success of an investment in our Preferred Stock or Common Stock will depend upon any future appreciation in its value. There is no guarantee that our Preferred Stock or Common Stock will appreciate in value.

Certain provisions of our Certificate of Incorporation and Bylaws and Delaware law make it more difficult for a third party to acquire us and make a takeover more difficult to complete, even if such a transaction were in the stockholders’ interest.

Our Certificate of Incorporation and Bylaws and certain provisions of Delaware State law could have the effect of making it more difficult or more expensive for a third party to acquire, or from discouraging a third party from attempting to acquire, control of the Company, even when these attempts may be in the best interests of our

stockholders. For example, we are governed by Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes mergers, asset sales or other transactions resulting in a financial benefit to the stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years, did own, 15% or more of the corporation's outstanding voting stock. These provisions may have the effect of delaying, deferring or preventing a change in our control.

Compliance with the reporting requirements of federal securities laws can be expensive.

We are subject to the information and reporting requirements of the Exchange Act and other federal securities laws, and the compliance obligations of the Sarbanes-Oxley Act. The costs of preparing and filing annual and quarterly reports and other information with the SEC and furnishing audited reports to stockholders are substantial. In addition, we will incur substantial expenses in connection with the preparation of registration statements and related documents with respect to the registration of resale of the Common Stock.

Applicable regulatory requirements, including those contained in and issued under the Sarbanes-Oxley Act, may make it difficult for us to retain or attract qualified officers and directors, which could adversely affect the management of its business and its ability to obtain or retain listing of our Common Stock.

We may be unable to attract and retain those qualified officers, directors and members of board committees required to provide for effective management because of the rules and regulations that govern publicly held companies, including, but not limited to, certifications required by principal executive officers. The enactment of the Sarbanes-Oxley Act has resulted in the issuance of a series of related rules and regulations and the strengthening of existing rules and regulations by the SEC, as well as the adoption of new and more stringent rules by the stock exchanges. The perceived increased personal risk associated with these changes may deter qualified individuals from accepting roles as directors and executive officers.

Further, some of these changes heighten the requirements for board or committee membership, particularly with respect to an individual's independence from the corporation and level of experience in finance and accounting matters. We may have difficulty attracting and retaining directors with the requisite qualifications. If we are unable to attract and retain qualified officers and directors, the management of our business and our ability to obtain or retain listing of our shares of Common Stock on any stock exchange (assuming we elect to seek and are successful in obtaining such listing) could be adversely affected.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or detect fraud. Investors could lose confidence in our financial reporting and this may decrease the trading price of our Common Stock.

We must maintain effective internal controls to provide reliable financial reports and detect fraud. As disclosed in this prospectus supplement and accompanying prospectus, we have previously identified material weaknesses in our internal control over financial reporting because we did not have sufficient written policies and procedures for accounting and financial reporting and we did not have effective controls over period end financial disclosures and reporting processes. Our management has taken action to begin remediating these material weaknesses, but we cannot be certain when remediation will have been completed. In future periods, we may identify additional deficiencies in our system of internal controls over financial reporting that may require remediation. There can be no assurances that any such future deficiencies identified may not be material weaknesses that would be required to be reported in future periods. Failure to maintain an effective system of internal controls could harm our operating results and cause investors to lose confidence in our reported financial information. Any such loss of confidence would have a negative effect on the trading price of our Common Stock.

The price of our common stock may become volatile, which could lead to losses by investors and costly securities litigation.

The trading price of our Common Stock may be highly volatile and could fluctuate in response to factors such as:

- actual or anticipated variations in our operating results;

announcements of developments by us or our competitors;
the timing of IND and/or BLA approval, the completion and/or results of our clinical trials;
regulatory actions regarding our products;
announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;

adoption of new accounting standards affecting the our industry;
additions or departures of key personnel;
introduction of new products by us or our competitors;
sales of the our Common Stock or other securities in the open market; and
other events or factors, many of which are beyond our control.

The stock market is subject to significant price and volume fluctuations. In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been initiated against such a company. Litigation initiated against us, whether or not successful, could result in substantial costs and diversion of our management's attention and Company resources, which could harm our business and financial condition.

USE OF PROCEEDS

The shares which may be sold pursuant to this prospectus will be sold for the respective accounts of each of the selling stockholders. Accordingly, the Company will not realize any proceeds from the sale of the shares, except that it will derive proceeds if options currently outstanding or hereafter granted are exercised. If exercised, such funds will be available to the Company for working capital and general corporate purposes. No assurance can be given, however, as to when or if any or all of the options will be exercised. All expenses of the registration of the shares have been paid for by the Company. See "Selling Stockholders" and "Plan of Distribution."

SELLING STOCKHOLDERS

The 353,239 shares of our common stock to which this reoffer prospectus relates is comprised entirely of shares issuable upon the exercise of options granted under the Plan to the selling stockholders named below, and are being registered for reoffers and resales by such selling stockholders, who acquired the shares pursuant to one of our "employee benefit plans" as that term is defined in Rule 405 of Regulation C under the Securities Act. The shares of common stock that may be resold pursuant to this prospectus may be subject the satisfaction of certain applicable vesting conditions pursuant to the terms of the respective grants. Such selling stockholders may resell all, a portion, or none of the shares of common stock from time to time while this prospectus is effective. Any changed information will be set forth in an amendment to the registration statement or supplement to this reoffer prospectus, to the extent required by law.

The following table sets forth the name and relationship to the Company of the selling stockholders and information regarding beneficial ownership of our common stock by the selling stockholders as of July 7, 2014. Unless otherwise indicated, beneficial ownership is determined in accordance with the rules of the Commission, and is based upon information provided by each respective selling stockholder identified below and other public documents filed with the Commission.

Unless otherwise specified, the address of each of the selling stockholders listed below is c/o Actinium Pharmaceuticals, Inc., 501 5th Avenue, 3rd Floor, New York, NY 10017.

Selling Stockholder	Position	Total Shares Beneficially Owned Prior to Offering (1)	Maximum Shares Offered Pursuant to this Prospectus	Shares Beneficially Owned Following Resale (2)	Percentage of Outstanding Shares of Common Stock after the Offering (3)
Alex Partners, LLC	Consultant	50,000	50,000(4)		
Amit Katiyar	Project Manager	20,000	20,000 (5)	-	-
Anslow & Jaclin	Former Legal Counsel	11,665	11,665 (6)	-	-
Betsy King	Consultant	24,975	24,975 (7)	-	-
Corey Sohmer	VP Finance and Business Development	50,000	50,000(8)	-	-
David Gould	Senior VP Finance and Corporate Development	225,000	225,000(9)	-	-
David Nicholson	Director	109,900	109,900(10)	-	-
Denis Earle	Senior VP Clinical Operations	250,000	250,000(11)	-	-
Dragan Cicic	Chief Operating Officer and Chief Medical Officer	549,685	549,685(12)	-	-
Evan Smith	VP Investor Relations and Finance	225,000	225,000(13)		
Gaylord King	Consultant	29,970	29,970(14)	-	-
Gerri Henwood	Consultant	66,600	66,600(15)	-	-
Gerry Orehostky	VP Quality and Regulatory Affairs	200,000	200,000(16)	-	-

Harold Wachtler	Former President & CEO	121,212	121,212(17)	-	-
John Pagel	Consultant	49,950	49,950(18)	-	-
Kaushik Dave	CEO	1,000,000	1,000,000(19)	-	-
Kuang-Chuhn Cheng	Director of Analytical Development	15,000	15,000(20)	-	-
MZ Group	Consultant	20,000	20,000(21)	-	-
Richard Sherman	Consultant	82,517	82,517(22)	-	-
Richard Steinhart	Director	49,950	49,950(23)	-	-
Robb Knie	Consultant	150,000	150,000(24)	-	-
Robert LeBoyer	Consultant	1,665	1,665(25)		
Rosemary Mazanet	Former Director	83,250	83,250(26)		
Sandesh Seth	Director	224,314	59,950(27)	164,364(28)	*
Sergio Traversa	Director	79,950	79,950(29)	-	-
Valarie Gibbons-Barney	Senior Quality Assurance and Document Specialist	6,000	6,000(30)	-	-

(1) The securities "beneficially owned" by a person are determined in accordance with the definition of "beneficial ownership" set forth in the rules and regulations promulgated under the Exchange Act, and accordingly, may include securities owned by and for, among others, the spouse and/or minor children of an individual and any other relative who has the same home as such individual, as well as other securities as to which the individual has or shares voting or investment power or which such person has the right to acquire within 60 days of July 7, 2014 pursuant to the exercise of options, or otherwise. Beneficial ownership may be disclaimed as to certain of the securities.

(2) Assumes that all shares of common stock offered by this prospectus are sold in this offering and that no other transactions with respect to shares of our common stock occur.

(3) Based on 27,232,346 shares of common stock issued and outstanding as of July 7, 2014.

(4) Includes all shares of restricted common stock granted to the selling stockholder.

(5) Includes (i) 10,000 shares of common stock underlying outstanding options granted to the selling stockholder and (ii) 10,000 shares of restricted common stock granted to the selling stockholder.

(6) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(7) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(8) Includes (i) 42,500 shares of common stock underlying outstanding options granted to the selling stockholder and (ii) 7,500 shares of restricted common stock granted to the selling stockholder.

(9) Includes (i) 200,000 shares of common stock underlying outstanding options granted to the selling stockholder and (ii) 25,000 shares of restricted common stock granted to the selling stockholder.

(10) Includes (i) 99,900 shares of common stock underlying outstanding options granted to the selling stockholder and (ii) 10,000 shares of restricted common stock granted to the selling stockholder.

(11) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(12) Includes (i) 546,185 shares of common stock underlying outstanding options granted to the selling stockholder and (ii) 3,500 shares of restricted common stock granted to the selling stockholder.

(13) Includes (i) 200,000 shares of common stock underlying outstanding options granted to the selling stockholder and (ii) 25,000 shares of restricted common stock granted to the selling stockholder.

(14) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(15) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(16) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(17) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(18) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(19) Includes (i) 675,000 shares of common stock underlying outstanding options granted to the selling stockholder and (ii) 325,000 shares of restricted common stock granted to the selling stockholder.

(20) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(21) Includes all shares of restricted common stock granted to the selling stockholder.

(22) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(23) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(24) Includes all shares of restricted common stock granted to the selling stockholder.

(25) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(26) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

(27) Includes (i) 49,950 shares of common stock underlying outstanding options granted to the selling stockholder and (ii) 10,000 shares of restricted common stock granted to the selling stockholder.

(28) Warrants to purchase an aggregate of 64,747 shares of Common Stock of the Company at an exercise price of $0.784 per share, exercisable on a cashless basis and warrants to purchase an aggregate of 99,617 of Common Stock of the Company at an exercise price of $0.784 per share, exercisable on a cashless basis issued to Amrosan, LLC, a partnership in which the majority member interest is owned by the family of Mr. Seth.

(29) Includes (i) 69,950 shares of common stock underlying outstanding options granted to the selling stockholder and (ii) 10,000 shares of restricted common stock granted to the selling stockholder.

(30) Includes all shares of common stock underlying outstanding options granted to the selling stockholder.

* Less than 1% of our common stock.

PLAN OF DISTRIBUTION

The common shares being offered for resale by the selling stockholders consist of 3,532,239 shares of common stock underlying outstanding options and restricted common stock granted to the selling stockholders under the Plans. We will pay any fees and expenses incurred by us incident to the registration of the securities.

Each selling stockholder of the securities and any of their pledgees, assignees and successors-in-interest permitted under the Plan may, from time to time, sell any or all of their securities covered hereby on The NASDAQ Capital Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. A selling stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- in transactions through broker-dealers that agree with the selling stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell securities under Rule 144 under the Securities Act, if available, rather than under this prospectus.

The amount of our common stock to be reoffered or resold by means of this prospectus by each selling stockholder, and any other person with whom such selling stockholder is acting in concert for the purpose of selling securities of our company, may not exceed, during any three month period, the amount specified in Rule 144(e) of the Securities Act.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of the securities or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The selling stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such

broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of securities of the common stock by the selling stockholders or any other person. We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

The validity of the shares of common stock being offered pursuant to this prospectus will be passed upon by Hiscock & Barclay, LLP, Syracuse, NY.

EXPERTS

The audited financial statements incorporated by reference in this prospectus and elsewhere in the registration statement have been so incorporated by reference in reliance upon the report of GBH CPAs, PC an independent registered public accounting firm, upon the authority of said firm as experts in accounting and auditing in giving said report.

WHERE YOU CAN FIND MORE INFORMATION

We filed with the Commission a registration statement under the Securities Act for the common stock in this offering. This prospectus does not contain all of the information in the registration statement and the exhibits and schedule that were filed with the registration statement. For further information with respect to us and our common stock, we refer you to the registration statement and the exhibits that were filed with the registration statement. Statements contained in this prospectus about the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and we refer you to the full text of the contract or other document filed as an exhibit to the registration statement.

We file annual, quarterly, and current reports and other information with the Commission. Our filings with the the Commission are available to the public on the commission’s website at www.sec.gov. Those filings are also available to the public on our corporate website at www.actiniumpharmaceuticals.com. The information we file with the Commission or contained on, or linked to through, our corporate website or any other website that we may maintain is not part of this prospectus or the registration statement of which this prospectus is a part. You may also read and copy, at the Commission’s prescribed rates, any document we file with the Commission, including the registration statement (and its exhibits) of which this prospectus is a part, at the Commission’s Public Reference Room located at 100 F Street, N.E., Washington, D.C. 20549. You can call the Commission at 1-800-SEC-0330 to obtain information on the operation of the Public Reference Room.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

We are incorporating by reference certain information that we have filed with the Commission under the informational requirements of the Exchange Act, which means that we are disclosing it to you by referring to another document filed separately with the Commission. The information contained in the documents we are incorporating by reference is considered to be a part of this prospectus, and the information that we later file with the Commission will automatically update and supersede the information contained or incorporated by reference in this prospectus. Accordingly, we incorporate by reference:

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2013, filed with the Securities and Exchange Commission on February 28, 2014;
- Our Annual Report on Form 10-K/A for the fiscal year ended December 31, 2013, filed with the Securities and Exchange Commission on April 10, 2014;
- Our Quarterly Report on Form 10-Q for the three months ended March 31, 2014, filed with the Securities and Exchange Commission on May 12, 2014
- Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 3, 2014;
- Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 13, 2014;
- Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 7, 2014;
- Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 24, 2014;
- Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 24, 2014;
- Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on June 11, 2014; and
- Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on June 24, 2014; and
- The description of our common stock, which is contained in our Form 8-K/A, filed with the Securities and Exchange Commission on January 28, 2013.

All documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus and prior to the filing of a post-effective amendment indicating that all securities offered have been sold or which deregisters all securities then remaining unsold, are incorporated by reference in this prospectus and are a part of this prospectus from the respective dates of filings of such documents. Any statement contained herein or in a 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 herein or in any other 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.

You may request a copy of any filings or information incorporated herein by reference, at no cost, by writing or telephoning us at the following address and telephone number: Actinium Pharmaceuticals, Inc., 501 5th Avenue, 3rd Floor, New York, NY 10017, Attention: Kaushik J. Dave, telephone number (732) 243-9495.

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DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Section 102(b)(7) of the Delaware General Corporation Law (the "DGCL") allows a corporation to provide in its certificate of incorporation that a director of the corporation will not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except where the directors breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our certificate of incorporation provides for this limitation of liability.

Section 145 of the DGCL provides that a Delaware corporation may indemnify any person who was, is or is threatened to be made, party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation or is or was serving at the request of such corporation as a director, officer employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his conduct was illegal. A Delaware corporation may indemnify any persons who are, or were, a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit, provided such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation's best interests, provided that no indemnification is permitted without judicial approval if the officer, director, employee or agent is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him against the expenses which such officer or directors has actually and reasonably incurred.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the corporation would otherwise have the power to indemnify him under Section 145.

Our certificate of incorporation also contains provisions to indemnify the directors, officers, employees or other agents to the fullest extent permitted by the Delaware General Corporation Law. These provisions may have the practical effect in certain cases of eliminating the ability of shareholders to collect monetary damages from directors. We are also a party to indemnification agreements with each of our directors. We believe that these provisions will assist us in attracting or retaining qualified individuals to serve as our directors.

The indemnification rights set forth above shall not be exclusive of any other right which an indemnified person may have or hereafter acquire under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director, officer, employee, or agent and shall inure to the benefit of the heirs, executors, and administrators of such person.

We maintain a general liability insurance policy that covers liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of our company pursuant to the foregoing provisions or otherwise, our company has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

No one has been authorized to give any information or to make any representations other than those contained or incorporated by reference in this prospectus and, if given or made, such information or representations must not be relied upon as having been authorized by us. This prospectus does not constitute an offer or a solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorized or in which the person making such offer is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation. Neither the delivery of this prospectus nor any sale hereunder shall, under any circumstances, create any implication that there has not been any change in our affairs since the date hereof.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and, in accordance therewith, file reports and other information with the Commission. The following documents, or portions thereof, filed by us with the Commission pursuant to the Exchange Act, are incorporated by reference in this Registration Statement:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2013, filed with the Securities and Exchange Commission on February 28, 2014;

Our Annual Report on Form 10-K/A for the fiscal year ended December 31, 2013, filed with the Securities and Exchange Commission on April 10, 2014;

Our Quarterly Report on Form 10-Q for the three months ended March 31, 2014, filed with the Securities and Exchange Commission on May 12, 2014

Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 3, 2014;

Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 13, 2014;

Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 7, 2014;

Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 24, 2014;

Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 24, 2014;

Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on June 11, 2014; and

Our Current Report on Form 8-K, filed with the Securities and Exchange Commission on June 24, 2014; and

The description of our common stock, which is contained in our Form 8-K/A, filed with the Securities and Exchange Commission on January 28, 2013.

All documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement indicating that all securities offered have been sold or which deregisters all securities then remaining unsold, are incorporated by reference in this Registration Statement and are a part of this Registration Statement from the respective dates of filings of such documents. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other 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 Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the General Corporation Law of the State of Delaware provides, in general, that a corporation incorporated under the laws of the State of Delaware, as we are, may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than a derivative action by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. In the case of a derivative action, a Delaware corporation may indemnify any such person against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification will be made in respect of any claim, issue or matter as to which such person will have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery of the State of Delaware or any other court in which such action was brought determines such person is fairly and reasonably entitled to indemnity for such expenses.

Our certificate of incorporation and bylaws provide that we will indemnify our directors, officers, employees and agents to the extent and in the manner permitted by the provisions of the General Corporation Law of the State of Delaware, as amended from time to time, subject to any permissible expansion or limitation of such indemnification, as may be set forth in any stockholders' or directors' resolution or by contract. Any repeal or modification of these provisions approved by our stockholders will be prospective only and will not adversely affect any limitation on the liability of any of our directors or officers existing as of the time of such repeal or modification.

We are also permitted to apply for insurance on behalf of any director, officer, employee or other agent for liability arising out of his actions, whether or not the General Corporation Law of the State of Delaware would permit indemnification.

Item 7. Exemption From Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit No.	Description
4.1	Specimen Common Stock Certificate*
4.2	Certificate of Incorporation of Actinium Pharmaceuticals, Inc. (incorporated by reference to Exhibit 3.1 of the Company's Form 8-K filed with the SEC on April 17, 2013).
4.3	Bylaws of Actinium Pharmaceuticals, Inc. (incorporated by reference to Exhibit 3.2 of the Company's Form 8-K filed with the SEC on April 17, 2013).

5.1	Opinion of Hiscock & Barclay, LLP *
23.1	Consent of GBH CPAs, PC *
23.2	Consent of Hiscock & Barclay, LLP (included in Exhibit 5.1) *
24.1	Power of Attorney (included on signature page) *

* Filed herewith

Item 9. Undertakings.

The undersigned Company 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;

(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;

(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 paragraphs (1)(i) and (1)(ii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Company pursuant to Section 13 or Section 15(d) of the Securities Exchange Act that are incorporated by reference in the Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act, 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.

The undersigned Company hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the 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.

The undersigned Company hereby undertakes to deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report, to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a–3 or Rule 14c–3 under the Exchange Act; and, where interim financial information required to be presented by Article 3 of Regulation S-X is not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the 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 Company of expenses incurred or paid by a director, officer or controlling person of the Company 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 Company 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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Company certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on this 7th day of July, 2014.

Actinium Pharmaceuticals, Inc.

By: /s/ Kaushik J. Dave
Name: Kaushik J. Dave
Title: President and Chief Executive Officer
(Duly Authorized Officer, Principal Executive Officer and Interim Principal Financial and Accounting Officer)

POWER OF ATTORNEY

Each person whose signature appears below hereby appoints each of Sandesh Seth and Kaushik J. Dave, severally, acting alone and without the other, his or her true and lawful attorney-in-fact, with full power of substitution, and with the authority to execute in the name of each such person, any and all amendments (including without limitation, post-effective amendments) to this registration statement, to sign any and all additional registration statements relating to the same offering of securities as this registration statement that are filed pursuant to Rule 462(b) of the Securities Act of 1933, and to file such registration statements with the Securities and Exchange Commission, together with any exhibits thereto and other documents therewith, necessary or advisable to enable the registrant to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission in respect thereof, which amendments may make such other changes in the registration statement as the aforesaid attorney-in-fact executing the same deems appropriate.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Kaushik J. Dave Kaushik J. Dave	President, Chief Executive Officer, Interim Chief Financial Officer and Director (principal executive officer and principal financial and accounting officer)	July 7, 2014
/s/ Sandesh Seth Sandesh Seth	Chairman of the Board of Directors	July 7, 2014
/s/ David Nicholson David Nicholson	Director	July 7, 2014

/s/ Richard I. Steinhart Richard I. Steinhart	Director	July 7, 2014
/s/ Sergio Traversa Sergio Traversa	Director	July 7, 2014

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